

เอกสารอ้างอิง



๑. จุฬาลงกรณ์มหาวิทยาลัย. ประวัติจุฬาลงกรณ์มหาวิทยาลัย ๒๔๕๕ - ๒๕๐๕. พระนคร: สมาคมสังคมศาสตร์แห่งประเทศไทย, ๒๕๑๐.
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การพัฒนารวม

ภาคผนวกทั้งหมดมีรายการและความหมายของการอ่านค่าต่างๆ โดยย่อ ดังนี้

- ภาคผนวก ก. เป็นโปรแกรมคอมพิวเตอร์ทั้งหมด และ Flowchart.
- ภาคผนวก ข. เป็นลักษณะหน่วยกิตประจำวิชา และจำนวนรายวิชาโดยมีตัวเลขในส่วนแรก เป็นจำนวนหน่วยกิตในแต่ละแบบของลักษณะหน่วยกิตประจำวิชา ส่วนที่สองตัวเลขในตารางเป็นจำนวนรายวิชาของคณะต่างๆ ในแต่ละลักษณะหน่วยกิตประจำวิชา เช่น รายวิชา ๑ หน่วยวิชา มีลักษณะหน่วยกิตประจำวิชา ๓ แบบ คือ แบบบรรยาย แบบฝึกหัด และแบบปฏิบัติการ โดยในแต่ละแบบเป็น ๑ หน่วยกิต และในแบบปฏิบัติการ (TYPE 3) นั้น มีทั้งหมด ๔๓ รายวิชา กระจายอยู่ในคณะวิศวกรรมศาสตร์, พาณิชยศาสตร์และการบัญชี, วิทยาศาสตร์ และ ทันตแพทยศาสตร์ เป็นจำนวน ๑๒, ๒ ๓๖ และ ๓ รายวิชาตามลำดับ ฯลฯ เป็นต้น
- ภาคผนวก ค. เป็นลักษณะแบบการสอนและจำนวนรายวิชา เป็นลักษณะทำนองเดียวกับ ภาคผนวก ข. และวิธีการอ่านค่าก็เหมือนกัน แต่ต่างกันที่ตัวเลขในส่วนแรกเป็นจำนวนชั่วโมงสอน แทนจำนวนหน่วยกิตเท่านั้น
- ภาคผนวก ง. เป็นตารางความถี่ของการใช้วัน เวลาในการสอนที่แยกตามหน่วยกิตและ แจกแจงเป็นรายคณะ แสดงเป็นตัวอย่างไว้เฉพาะรายวิชา ๓ หน่วยกิตของบางคณะ โดยตัวเลขใน ตารางเป็นจำนวนชั่วโมงที่รายวิชา ๓ หน่วยกิตของแต่ละคณะใช้สอนในวันเวลา เหล่านั้น
- ภาคผนวก จ. เป็นตารางการใช้ห้องเรียน แสดงถึงรายวิชาที่ใช้สอนในวันเวลาต่างๆ ของ ห้องเรียนนั้น โดยตัวเลขแถวแรกเป็นรหัสวิชา และแถวที่สองเป็นตอนที่ ตัวอย่างเช่น คณะเศรษฐศาสตร์ ตึก ECON ห้อง ๕๐๔ วันจันทร์ เวลา ๘.๐๐ - ๙.๐๐ น. มีรายวิชา ๖๑๔ - ๖๒๔ ตอนที่ ๑ ใช้ห้องเรียนนี้ เป็นต้น
- ภาคผนวก ฉ. เป็นตารางสอนของอาจารย์ แสดงถึงรายวิชาทั้งหมดที่อาจารย์แต่ละท่านสอน ในวันเวลาต่างๆ โดยมีความหมายดังนี้ แถวที่หนึ่ง เป็นรหัสวิชา แถวที่สอง เป็นตอนที่ แถวที่สาม เป็นชื่อย่อตึก และแถวที่สี่ เป็นเลขที่ห้องเรียน เช่น อาจารย์ LIKIT คณะวิทยาศาสตร์ ในวันจันทร์ เวลา ๘.๐๐ - ๙.๐๐ น. สอนรายวิชา ๖๖๕ - ๓๑๑ ตอนที่ ๑ ที่ตึก GENSC ห้องเลขที่ ๘๓๐๑ เป็นต้น

ภาคผนวก ข. มี ๔ ส่วน มีรายละเอียดดังนี้

ส่วนที่หนึ่ง เป็นตารางการใช้ห้องเรียน มีลักษณะและความหมายของค่าตัวเลขเป็นแบบเดียวกับภาคผนวก จ. แต่ได้ตารางจะพิมพ์บอกความซ้ำซ้อนของการใช้ห้องเรียนที่เกิดขึ้นถ้ามี โดยแยกเป็นรหัสที่แสดงถึงรายวิชา และวันเวลาที่เกิดการซ้ำซ้อนกัน

ส่วนที่สอง เป็นตารางสอนของอาจารย์ มีลักษณะและความหมายเป็นแบบเดียวกันภาคผนวก ฉ. แต่ได้ตารางจะพิมพ์บอกความซ้ำซ้อนที่เกิดขึ้นถ้ามี โดยบอกเป็นรหัสที่แสดงถึงรายวิชาและวันเวลาที่เกิดการซ้ำซ้อนกัน

ส่วนที่สาม เป็นตารางความถี่ของการใช้วันเวลาในการสอน เหมือนกับภาคผนวก จ.

ส่วนที่สี่ เป็นแบบฟอร์มคอมพิวเตอร์ (จท ๙๒) ที่ฝ่ายตารางสอนตารางสอบหน่วยทะเบียนกลางส่งให้คณะ

ภาคผนวก ข. เป็นหนังสือขอความร่วมมือด้านข้อมูล

การคำนวณ ก.

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*JOBID,*TRANS      MR. ARAM TANTISOPONWANHIS-
*JOBID,ASSIGN 7 TO TAPE,2200
      DIMENSION ICARD(80),INDEX(200)
C ****PROGRAM CONVERSE DATA MADE INDEX FILE AND CHECK ERROR OF CODE OF CARD
C      INPUT IS SCHEDULE CARD IN TAPE WHICH HAS 6 TYPE
C *** OUTPUT IS PRINT AND TAPE PRINTER FOR ERROR RECORD ..TAPE FOR INDEX AND
C      CARD IMAGE USED TAPE NO. 6 AND 7 VARIABLE NAME IS ICARD AND INDEX
      WRITE(3,567)
257 FORMAT(1H0,10X,83H*** PLEASE PLACE TAPE IN DRIVE NO 6 AND 7 AFTE
      IR THIS PRESS RJM *** THANK YOU ***)
      PAUSE
      REWIND 6
      REWIND 7
      REWIND 8
C *** WRITING HEADER OF TAPE AT FIRST RECORD
      WRITE(6,456)
456 FORMAT(4H1HDR,16X,10HSCHEDULES )
      WRITE(7,456)
      I = 0
      IB = 0
      IERROR = 0
C *** READING CARD INPUT OF SCHEDULE CARDS
      3 READ(8,20) ICARD
      20 FORMAT(80A1)
      CALL EOF(K)
      IF(K.EQ.1) GO TO 50
      IB = IR + 1
      NN = ICARD(80)
      IF(ICARD(40).EQ.14A.AND. IN.EQ.14B) GO TO 21
      IF(NN.GE.141.AND.NN.LE.146) GO TO 10
      WRITE(3,20) ICARD
      IERROR = IERROR + 1
      GO TO 3
C *** WRITING TAPE IN THE FORM OF CARD (CARD IMAGE )
      21 ICARD(40) = 3H
      ICARD(41) = 3HA
      ICARD(42) = 3HR
      10 WRITE(4,20) ICARD
      I = I + 1
      IF(I.GT.200) GO TO 15
      INDEX(I) = NN
      GO TO 3
C ----WRITE TAPE WHEN INDEX ARRAY IS 200 ELEMENT
      15 WRITE(7,30) INDEX
      30 FORMAT(200A1)
      I = 1
      INDEX(I) = NN
      GO TO 3
      50 I = I + 1
      IF(I.GT.200) I = 1
      DO 60 J = 1,200
      60 INDEX(J) = 349
      WRITE(7,30) INDEX
      WRITE(3,30) IR
      30 FORMAT(1H0,5X,9HTHEY ARE ,15,33H CARD OF CLASS SCHEDULE DATA CARD)
      IF(IERROR) 31,32,23
      31 WRITE(3,34) IERROR
      34 FORMAT(1H0,5X,44HTHE ERROR VALJE IN VARIABLE 6IERROR& IS ,I7)
      GO TO 37
      32 WRITE(3,135)
      135 FORMAT(1H0,32X,47HTHEY ARE NO ERROR CARD ABOUT CARD CODE**)
      GO TO 37
      33 WRITE(3,36) IERROR
      36 FORMAT(1H0,5X,11HTHEY ARE ,15,30H ERROR CARDS OF CARD CODE)
      37 WRITE(3,38)
      38 FORMAT(141,////)
      END FILE 6
      END FILE 7
      STOP
      END

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*JORID,**ARTAP          MR. ARAM TANTISOPONWANIS-I
*JORID,ASSIGN 7 TO TAPE, R200
COMMON IKEY(9)
COMMON INDEX(200),I,ICARD,ICARD4
COMMON ICOUN(2),ISECTN,ITYP,ITOTCR,ICRT(4),ITEAHR(8),ICOUNT
COMMON IDATE(15),IBULD(5),IROOIN,INSTN(7)
COMMON ICRT(56),ICRTYP(6),ITEH(10),IDAY(7),ITEATP(7)
COMMON ICOUNAM(6),IDAYS(5),IBULD(5),INST(7)
COMMON IROOIN,IROOIN,IROOIN,INC,INL,M,LD,ITIMET,ISTART,IEND
C *** PROGRAM EDITING AND CONVERSION TO TAPE FILE FOR ANALYSIS
C OR FOR CHECKING ERROR ABOUT CREDIT NUMBER INSTRUCTOR AND CLASSROOM
C SCHEDULE INCLUDE BUILD THE SCHEDULE TABLE OF INSTRUCTOR AND CLASSROOM
C *** INPUT IS CLASS SCHEDULE DATA IN TAPE NO. 6 INDEX OF CARD CODE IN TAPE NO.7
C DATA CARD FOR COMPARE ABOUT CREDIT & TEACHING TYPE DAYS NO. OF CREDIT AND
C TEACHING HOURS VARIABLE NAME IS .. ICRTYP ITEH IDAY ITEATP IKEY
C *** READ READING DATA INPUT FROM TAPE NO. 6 FOR EACH TYPE OF CARD CODE
C THIS CHAIN FOR READING DATA CARD CODE 1,2,3,4 AND TRANSFER VALUE OF CARD
C CODE & .. INPUT NAME IS ICI, ICR, ICR, ICRT, ICRT, ICRT
C *** OUTPUT IS TAPE NO. 8 WHICH NAME IS .. ICOUN, ISECTN, ITP, ITOTCR, ICRT,
C ITEAHR, ICOUNT, IDATE, IBULD, IROOIN, IROOIN, INSTN *****
WRITE(3,567)
567 FORMAT(1H0,10X,83H*** PLEASE PLACE TAPE IN DRIVE NO 6 7 AND 8 AFTE
| IR THIS PRESS RUN *** THANK YOU ***)
PAUSE
REWIND 6
REWIND 7
REWIND 8
C *** CHECK HEADER OF TAPE INPUT
6 READ(6,459) IV,IW,IX,IY,IZ
458 FORMAT(A1,A3,16X,3A3)
IF(IV.NE.141.OR.IW.NE.34HDR.OR.IX.NE.34SCH.OR.IZ.NE.3HLES)GO TO571
C *** CHECK HEADER OF TAPE INPUT
7 READ(7,459) IV,IW,IX,IY,IZ
IF(IV.NE.141.OR.IW.NE.34HDR.OR.IX.NE.34SCH.OR.IZ.NE.3HLES)GO TO572
C *** READING DATA CARD USE FOR COMPARE IN THE PROGRAM
READ(2,100) IKEY
READ(2,100) ICRTYP,ITEH,IDAY,ITEATP
100 FORMAT(16A1,7A2,7A3)
READ(7,9999) INDEX
9999 FORMAT(200I1)
I = 0
ICARD4 = 0
ITYP = 0
IDATE(1) = 0
IROOIN = 34
IROOIN = 34
3 I = I + 1
IF(I.GT.200) GO TO 13
C *** CHECKING END OF CARD CODE ARRAY
NN = INDEX(I)
IF(NN.EQ.0) GO TO 1000
TO OPERATE EACH TYPE OF CARD CODE
GO TO (15,15,35,45,15,15),NN
15 READ(6,16) ICI
16 FORMAT(I3)
GO TO 3

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C *** READING NEW INDEX OF 200 ELEMENT
13 I = 0
   READ(7,9999) INDEX
   GO TO 3
C --- READING CARD CODE 4 FOR CHECKING , PRINTING ERROR AND TRANSE TOTAP
45 READ(6,46) IC1,IC2,ICR,ICRTE,ICODE
46 FORMAT(I3,I1X,I3,I2,4X,56A1,10X,11)
   ICARD = 0
   IF(ICARD4.EQ.0) GO TO 19
   IF(ITYP.EQ.0.AND.IDATE(1).EQ.0.AND.IROOMN.EQ.3H ) GO TO 19
C *** WRITING TAPE BECAUSE NEW SUBJECT
   WRITE(8,11) ICOUN,ISECTN,ITYP,ITOTCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
   I,IROOMN,IROOMO,INSTRN
11 FORMAT(2I3,I2,I1,14I2,15I3,5A1,A3,A2,7A1)
C *** LOOP FOR TRANSFER NEW COURSE AND CLEAR CREDIT TYPE TEACHING TYPE AND DATE
19 ICOUN(1) = IC1
   ICOUN(2) = IC2
   ITOTCR = ICR
   ICARD4 = 1
   ITYP = 0
   DO 60 J = 1,4
60 ICRT(J) = 0
   DO 61 J = 1,8
61 ITEAHR(J) = 0
   DO 62 J = 1,15
62 IDATE(J) = 0
   IROOMN = 3H
   IROOMO = 3H
   CALL ICHAA
   GO TO 3
35 CALL ICHAR
   GO TO 3
571 WRITE(3,459) IV,IW,IX,IY,IZ.
   BACKSPACE 6
   PAUSE 1
   GO TO 6
572 WRITE(3,459) IV,IW,IX,IY,IZ.
459 FORMAT(1H0,20X,25H***ERROR HEADER TAPE IS ,A1,A3,16X,3A3,10X,
137H***PLEASE PLACE THE RIGHT TAPE***)
   BACKSPACE 7
   PAUSE 2
   GO TO 7
1000 REWIND 6
   REWIND 7
C *** WRITING LAST RECORD TO TAPE
   WRITE(8,11) ICOUN,ISECTN,ITYP,ITOTCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
   I,IROOMN,IROOMO,INSTRN
   END FILE 8
   REWIND 8
C *** CHECK HEADER OF TAPE INPJT
17 READ(7,458) IV,IW,IX,IY,IZ
   IF(IV.NE.141.OR.IW.NE.3HHR.OR.IX.NE.3HSCH.OR.IZ.NE.3HLES) GO TO573
113 READ(7,9999) INDEX
C *** CHECKING END OF TAPE FOR INDEX FILE
   CALL EOF(K)
   IF(K.EQ.1) GO TO 1100
C *** LOOP FOR PRINTING INDEX FILE ( CARD CODE )
   WRITE(3,50) INDEX
50 FORMAT(6X,40I3/)
   GO TO 113
573 WRITE(3,459) IV,IW,IX,IY,IZ.
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BACKSPACE 7
PAUSE 3
GO TO 17
1100 STOP
END
SUBROUTINE ICHAA
COMMON IKEY(9)
COMMON INDEX(200),I,ICARD,ICARD4
COMMON ICDUN(2),ISECTN,ITYP,ITOTC,ICRT(4),ITEAHR(8),ICOUNT
COMMON IDATE(16),IBULD(5),IROOM,INSTRN(7)
COMMON ICRTS(56),ICRTYP(6),ITEH(10),IDAY(7),ITEATR(7)
COMMON ICONAM(6),IDAYS(5),IBUILD(8),INST(7)
COMMON IROO10,IROOM,IROOM1,INC,INL,N,IO,ITIBET,ISTART,IEND
C *** SUBROUTINE FOR CHECKING CREDIT TYPE, TEACHING TYPE AND TRANSFER CREDIT NO.
C TEACHING HOURS TO THEIR POSITION IN FILE *** END OF "ICHA" BY ) OF "
IF(ICRTS(1).NE.14) GO TO 49
M = 2
GO TO 51
C *** SEARCH FOR CREDIT TYPE AND TRANSFER CR. NO. TO TAPE FILE AND CHECK
C FOR FIRST LETTER AT ODD POSITION NUMBER
49 K = 1
447 J = 1
50 L = J + J
IL = K + K
IF(ICRTYP(IL-1).EQ.ICRTS(IL-1).AND.ICRTYP(L).EQ.ICRTS(IL)) GO TO 400
J = J + 1
IF(J-3)50,50,114
400 GO TO (141,142,141),J
C *** LOOP FOR CHECKING AND TRANSFER CREDIT NUMBER OF LECTURE
C *** LOOP FOR CHECKING AND TRANSFER CREDIT NUMBER OF PRACTICE
141 IF(ICRTS(IL+3).EQ.14.AND.ICRTS(IL+5).EQ.14) GO TO 1141
IF(ICRTS(IL+5).NE.14) IL = IL + 1
1141 DO 40 IN = 1,9
IF(ICRTS(IL+4).EQ.IKEY(IN)) GO TO 510
40 CONTINUE
IN = 0
510 ICRT(J) = IN
IF(ICRTS(IL+3).EQ.14) GO TO 130
IK = IL + 5
GO TO 44
130 ICRT(J) = ICRT(J) + 10
IK = IL + 5
GO TO 44
C *** LOOP FOR CHECKING AND TRANSFER CREDIT NUMBER OF LABORATORY
142 IF(ICRTS(IL+2).EQ.14.AND.ICRTS(IL+4).EQ.14) GO TO 1142
IF(ICRTS(IL+4).NE.14) IL = IL + 1
1142 DO 20 IN = 1,9
IF(ICRTS(IL+3).EQ.IKEY(IN)) GO TO 520
20 CONTINUE
IN = 0
520 ICRT(J) = IN
IF(ICRTS(IL+2).EQ.14) GO TO 131
IK = IL + 4
GO TO 44
131 ICRT(J) = ICRT(J) + 10
IK = IL + 4
C *** LOOP FOR CHECKING NEW CREDIT TYPE OR END OF CREDIT TYPE (BY ( 00 8)
44 IM = IK + 5
IK = IK + 1
IF(IM.GT.56) IM = 56
DO 101 M=IK,IM

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IF(ICRTE(M).EQ.1H%.OR.ICRTE(M).EQ.1H()) GO TO 52
IF(ICRTE(M).EQ.1H .OR.ICRTE(M).EQ.1H+) GO TO 401
IF(ICRTE(M).EQ.1HL.OR.ICRTE(M).EQ.1HP) GO TO 403
IF(ICRTE(M).EQ.1HC.AND.ICRTE(M+1).EQ.1HR) GO TO 401
IF(ICRTE(M-1).EQ.1HC.AND.ICRTE(M).EQ.1HR) GO TO 401
IF(ICRTE(M).NE.1H )GO TO 1114
401 CONTINUE
GO TO 1400
C *** CHECKING POSITION NUMBER IS ODD OR EVEN FOR CREDIT TYPE
403 IM = M/2
IF(2*IM.EQ.M)GO TO 51
K = (M-1)/2 + 1
GO TO 447
52 M = M+ 1
IF(ICRTE(M).EQ.1H )GO TO 52
IM = M/2
IF(2*IM.EQ.M)GO TO 53
K = (M-1)/2 + 1
C *** SEARCH TEACHING TYPE FOR TRANSFER HR. TO TAPE AND CHECKING ERROR
FOR FIRST LETTER AT ODD POSITION IN I48R
448 J = 1
48 L = J + J
IL = K + K
IF(ITEH(IL-1).EQ.ICRTE(IL-1).AND.ITEH(L).EQ.ICRTE(L))GO TO 500
J = J + 1
IF(J-5)48,48,119
500 GO TO (101,102,103,102,102),J
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF LECTURE
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF PRACTICE
101 IF(ICRTE(IL+3).EQ.1H%)GO TO 110
103 IF(ICRTE(IL+3).EQ.1H .AND.ICRTE(IL+5).EQ.1H ) GO TO 1101
IF(ICRTE(IL+5).NE.1H ) IL = IL + 1
1101 DO 4 IN = 1,9
IF(ICRTE(IL+4).EQ.IKEY(JN)) GO TO 8
4 CONTINUE
IN = 0
8 ITEAHR(J) = IN
IF(ICRTE(IL+3).EQ.1H1) GO TO 133
IK = IL + 5
GO TO 210
133 ITEAHR(J) = ITEAHR(J) + 10
IK = IL + 5
GO TO 210
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF LABORATORY
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF TUTORIAL
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF STUDIO
102 IF(ICRTE(IL+2).EQ.1H .AND.ICRTE(IL+4).EQ.1H ) GO TO 1102
IF(ICRTE(IL+4).NE.1H ) IL = IL + 1
1102 DO 5 IN = 1,9
IF(ICRTE(IL+3).EQ.IKEY(JN)) GO TO 10
5 CONTINUE
IN = 0
10 ITEAHR(J) = IN
IF(ICRTE(IL+2).EQ.1H1) GO TO 134
IK = IL + 4
GO TO 210
134 ITEAHR(J) = ITEAHR(J) + 10
IK = IL + 4
C *** LOOP FOR CHECKING NEW TEACHING TYPE OR END OF TEACHING TYPE (BY ) OR #)
210 IM = IK + 6
IK = IK + 1

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IF(IM.GT.56) IM = 56
DO 106 M = IK,IM
IF(ICRTE(M).EQ.1H.OR.ICRTE(M).EQ.14) GO TO 1400
IF(ICRTE(M).EQ.1H .OR.ICRTE(M).EQ.14) GO TO 106
IF(ICRTE(M).EQ.1HL.OR.ICRTE(M).EQ.14P.OR.ICRTE(M).EQ.14T.OR.ICRTE(
IM).EQ.14S)GO TO 108
IF(ICRTE(M).EQ.1HH.AND.ICRTE(M+1).EQ.14R)GO TO 106
IF(ICRTE(M-1).EQ.14H.AND.ICRTE(M).EQ.14R)GO TO 106
IF(ICRTE(M).NE.1H )GO TO 1119
106 CONTINUE
GO TO 1400
C *** CHECKING POSITION NUMBER IS ODD OR EVEN FOR TEACHING TYPE
108 IM = M/2
IF(2*IM.EQ.M)GO TO 53
K = (M-1)/2 + 1
GO TO 448
110 IF(ICRTE(IL+4).EQ.1HL)GO TO 112
IF(ICRTE(IL+4).EQ.1HT)GO TO 113
GO TO 1400
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF LECTURE/LABORATORY
112 IF(ICRTE(IL+7).EQ.1H .AND.ICRTE(IL+9).EQ.14 ) GO TO 1112
IF(ICRTE(IL+9).NE.1H ) IL = IL + 1
1112 DO 34 IN = 1,9
IF(ICRTE(IL+8).EQ.IKEY(IN)) GO TO 35
34 CONTINUE
IN = 0
35 ITEAHR(6) = IN
IF(ICRTE(IL+7).EQ.1H1) ITEAHR(6) = ITEAHR(6) + 10
IK = IL + 9
GO TO 210
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF LECTURE/TUTORIAL
113 IF(ICRTE(IL+7).EQ.1H .AND.ICRTE(IL+9).EQ.14 ) GO TO 1113
IF(ICRTE(IL+9).NE.1H ) IL = IL + 1
1113 DO 144 IN = 1,9
IF(ICRTE(IL+8).EQ.IKEY(IN)) GO TO 45
144 CONTINUE
IN = 0
45 ITEAHR(7) = IN
IF(ICRTE(IL+7).EQ.1H1) ITEAHR(7) = ITEAHR(7) + 10
IK = IL + 9
GO TO 210
C *** OTHER CREDIT TYPE
1114 IL = M + 1
114 IK = IL - 1
IM = IK + 6
IF(IM.GT.56) IM = 56
DO 115M = IK,IM
IF(ICRTE(M).EQ.1H )GO TO 117
IF(ICRTE(M).EQ.1H%.OR.ICRTE(M).EQ.14()) GO TO 52
115 CONTINUE
GO TO 1400
C *** LOOP FOR CHECKING AND TRANSFER CREDIT NUMBER OF OTHER
117 IF(ICRTE(M).EQ.1H .AND.ICRTE(M+2).EQ.14. ) GO TO 1117
IF(ICRTE(M+2).NE.14 ) M = M + 1
1117 DO 55 IN = 1,9
IF(ICRTE(M+1).EQ.IKEY(IN)) GO TO 56
55 CONTINUE
IN = 0
56 IF(ICRT(4).NE.0) IN = IN + ICRT(4)
ICRT(4) = IN
IF(ICRTE(M).EQ.1H1) ICRT(4) = ICRT(4) + 10

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      IK = M + 2
      GO TO 44
C *** OTHER TEACHING TYPE
1119 IL = M + 1
      IK = IL - 1
      IM = IK + 6
      IF (IM.GT.56) IM = 56
      DO 120M = IK,IM
      IF (ICRTE(M).EQ.1H) GO TO 122
120 CONTINUE
      GO TO 1400
C *** LOOP FOR CHECKING AND TRANSFER TEACHING HOUR NUMBER OF OTHER
122 IF (ICRTE(M).EQ.1H .AND. ICRTE(M+2).EQ.1H ) GO TO 1122
      IF (ICRTE(M+2).NE.1H ) M = M + 1
1122 DO 57 IN = 1,0
      IF (ICRTE(M+1).EQ.IKEY(IN)) GO TO 58
57 CONTINUE
      IN = 0
58 IF (ITEAHR(3).NE.0) IN = IN + ITEAHR(3)
      ITFAHR(3) = IN
      IF (ICRTE(M).EQ.1H) ITEAHR(3) = ITFAHR(3) + 10
      IK = M + 2
      GO TO 210
C VVV SEARCH CR TYPE OF THE CASE THAT 1ST LETTER AT EVEN POSITION NUMBER
51 K = M/2
      J = 1
511 IL = K + K
      L = J + J
      IF (ICRTYP(L-1).EQ.ICRTE(IL).AND.ICRTYP(L).EQ.ICRTE(IL+1)) GO TO 4001
      J = J + 1
      IF (J-3) 511,511,114
4001 IL = IL + 1
      GO TO 400
C VVV SEARCH TEACH TYPE OF THE CASE THAT 1ST LETTER AT EVEN POSITION NO.
53 K = M/2
      J = 1
533 IL = K + K
      L = J + J
      IF (ITEH(L-1).EQ.ICRTE(IL).AND.ITEH(L).EQ.ICRTE(IL+1)) GO TO 5001
      J = J + 1
      IF (J-5) 533,533,119
5001 IL = IL + 1
      GO TO 500
1400 ICARD = 0
      RETURN
      END
      SUBROUTINE ICHAR
      COMMON IKEY(9)
      COMMON INDEX(200),I,ICARD,ICARD4
      COMMON ICOUN(2),ISECTN,ITY,ITOTCR,ICRT(4),ITEAHR(8),ICOUT
      COMMON INATE(15),IBULD(5),IROON,INSTRN(7)
      COMMON ICRTE(56),ICRTYP(6),ITEH(10),IDAY(7),ITEATR(7)
      COMMON ICNAM(6),IDAYS(5),IBJILD(5),INST(7)
      COMMON IQD40,IROON,IROOM1,INC,INL,M,IO,ITIMET,ISTART,IEND
      DATA ITSET0,ITSET1,ITSET2,ITSETR/140,141,142,143/
C *** SUBROUTINE FOR READING CARD CODE 3 TRANSFER BUILDING, ROOM, INSTRUCTOR,
C TEACHING TYPE, SECTION NUMBER AND CONVERSE DAYS & TIMES TO THEIR POSITION
C WRITING TAPE WHEN .NEW SECTION OR TEACHING TYPE OR BUILDING OR ROOM OR
C INSTRUCTOR NOT THE SAME AS THE OLD RECORD
C *** INPT IS TAPE NO. 6 ..VARIABLE NAME IS IC1, IC2, ICNAM, ITY, ISEC, ISTART
C ITES, IEND, IDAYS, IROON,IROOM1, IBJILD, INST, ICR, ICRS, ICODE

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C *** OUTPUT IS TAPE NO. 8 WHICH NAME IS .. ICOUN, ISECTN, ITYP, ITOTCR, ICRT,
C ITEAHR, ICOUNT, IDATE, IBUILD, IROOMN, IROOMO, INSTRN ***
READ(6,36)IC1,IC2,ICONA,ITY,ISEC,ISTART,ITES,IEND,IDAYS,IROOM,
IROOM1,IBUILD,INST,ICR,ICRS,ICODE
36 FORMAT(2X,I3,1X,I3,6A3,A3,3X,I2,1X,I4,1X,A1,I3,5A2,A3,A2,5A1,7A1,I
13,I3,1X,I1)
IF(ISTART.EQ.0.AND.IEND.EQ.0.AND.IDAYS(1).EQ.24 ) GO TO 3
IF(ITES.EQ.ITSETR.OP.IDAYS(1).EQ.2(4R) GO TO 1234
IF(ITY.EQ.34 .AND.ISEC.EQ.0.AND.ISTART.EQ.0.AND.IEND.EQ.0)GO TO4
IF(ICARD.EQ.0)GO TO 8
C YYY FIND THE TEACHING TYPE OF CARD 3 AND TRANSFER SOME DATA TO TAPE FILE
DO 39M=1,7
IF(ITY.EQ.ITEATR(M))GO TO 40
39 CONTINUE
M = M + 1
40 ITY1= M
IF(ITY1.EQ.ITYP) GO TO 333
C *** WRITING TAPE BECAUSE TEACHING TYPE IS DIFFERENCE
WRITE(8,11)ICOUN,ISECTN,ITY,ITOTCR,ICRT,ITEAHR,ICOUNT,IDATE,IBUILD
1,IROOMN,IROOMO,INSTRN
11 FORMAT(2I3,I2,I1,I4I2,I5I3,3A1,A3,A2,7A1)
ITYP = ITY1
IF(ISEC.EQ.0.OR.ISEC.EQ.ISECTN) GO TO 222
ISECTN = ISEC
GO TO 222
8 ICARD = 1
ISECTN = ISEC
IF(IC1.NE.ICOUN(1).OR.IC2.NE.ICOUN(2)) GO TO 38
C *** CHECKING CREDIT NUMBER WHICH PUNCHING IN CARD CODE 4
ICRTOT = ICRT(1) + ICRT(2) + ICRT(3) + ICRT(4)
IF(ICRTOT.NE.ITOTCR.OR.ICRTOT.EQ.0) GO TO 14
C *** LOOP FOR TRANSFER BUILDING ROOM INSTRUCTOR SECTION TEACHING TYPE AND
C CLEAR DATE AREA
222 DO 2 M=1,5
IBUILD(M) = IBUILD(M)
2 CONTINUE
IROOMN = IROOM
IROOMO = IROOM1
DO 1 M=1,7
INSTRN(M) = INST(M)
1 CONTINUE
DO 10 J = 1,15
10 IDATE(J) = 0
C *** LOOP FOR CHECKING TEACHING TYPE
DO 20 M = 1,7
IF(ITY.EQ.ITEATR(M)) GO TO 21
20 CONTINUE
M = M + 1
21 ITYP=M
C *** LOOP FOR CHECKING DATE AND CONVERSE
INC = 0
41 IC = 0
IC = IC + 1
DO 7M=1,7
IF(IDAYS(IC).EQ.IDAY(M)) GO TO 135
7 CONTINUE
GO TO 3
C *** LOOP FOR CONVERSE DAYS AND TIMES
135 ITIME1 = ISTART/100 - 7
IF(ITES.EQ.ITSETR.OR.ITES.EQ.14 ) GO TO 42
IF(ITES.EQ.ITSET1)IEND = IEND + 1000

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IF(ITES.EQ.ITSETZ)IEND = IEND + 2000
42 ITIME2 = IEND/100 - 7
ITIME1 = ITIME2 - ITIME1
IF(ITIME1.LE.0) GO TO 442
INL = INC + ITIME1
INC = INC + 1
IF(INC.GE.15) GO TO 442
DO 5 I0 = INC,INL
IDATE(ID) = 10**4 + ITIME1
ITIME1 = ITIME1 + 1
5 CONTINUE
INC = INL
ICOUNT = INL
IC = IC + 1
IF(IC.GT.5) GO TO 442
IF(IDAYS(IC).EQ.24 ) GO TO 3
DO 120 M = 1,7
IF(IDAYS(IC).EQ.IDAY(M)) GO TO 421
120 CONTINUE
421 ITIME1 = ISTART/100 - 7
GO TO 42
442 WRITE(3,4444) IC1,IC2,ICONAM,ITY,ISEC,IROOM,IROOM1,ICR,ICRS,ICODE
4444 FORMAT(10D0 ****,2I4,7A3,3X,I3,A3,A2,2I4,I2)
INC = 0
GO TO 3
333 IF(ISEC.EQ.0.OR.ISEC.EQ.ISECTN) GO TO 555
C *** WRITING TAPE BECAUSE NEW SECTION
WRITE(8,11)ICOUNT,ISECTN,ITY,IOTOCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
1,IROOMN,IROOMO,INSTRN
ISECTN = ISEC
GO TO 222
555 DO 38 I3 = 1,5
IF(IBULD(I3).NE.IBUILD(I3))GO TO 788
88 CONTINUE
IF(IROOMN.NE.IROOM.OR.IROOMO.NE.IROOM1) GO TO 688
DO 12 I3 = 1,7
IF(INSTRN(I3).NE.INST(I3))GO TO 13
12 CONTINUE
GO TO 41
C *** WRITING TAPE BECAUSE BUILDING IS DIFFERENCE
788 WRITE(8,11)ICOUNT,ISECTN,ITY,IOTOCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
1,IROOMN,IROOMO,INSTRN
GO TO 222
C *** WRITING TAPE BECAUSE CLASSROOM IS DIFFERENCE
688 WRITE(8,11)ICOUNT,ISECTN,ITY,IOTOCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
1,IROOMN,IROOMO,INSTRN
GO TO 222
C *** WRITING TAPE BECAUSE INSTRUCTOR IS DIFFERENCE
13 WRITE(8,11)ICOUNT,ISECTN,ITY,IOTOCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
1,IROOMN,IROOMO,INSTRN
GO TO 222
C *** PRINTING ERROR DATA FOR CARD CODE THREE
38 WRITE(3,37)IC1,IC2,ICONAM,ITY,ISEC,ISTART,ITES,IEND,IDAYS,IROOM,
IROOM1,IBUILD,INST,ICR,ICRS,ICODE
37 FORMAT(1H0,32H ERROR DATA OF COURSE NUMBER IS,2X,I4,1H-,I4,7A3,1X
1,I3,15,1H-,A1,I4,5A2,A3,A2,12A1,2I4,I2)
GO TO 3
14 WRITE(3,14) ICOUNT, TOTCR,ICRT
15 FORMAT(1H0,5X,40HERROR DATA CARD ABOUT CREDIT NUMBER ***,I4,1H-,
1I4,5I3)
GO TO 3
1234 WRITE(3,122)IC1,IC2,ICONAM,ITY,ISEC,ISTART,ITES,IEND,IDAYS,IROOM,
IROOM1,IBUILD,INST,ICR,ICRS,ICODE
122 FORMAT(1H0,5X,42H** DATA CARD WHICH DAY OR TIME IS AR ***,I5,I4,
17A3,1X,I4,1X,I5,1H-,A1,I4,5A2,A3,A2,12A1,2I4,I2)
GO TO 3
4 WRITE(8,11)ICOUNT,ISECTN,ITY,IOTOCR,ICRT,ITEAHR,ICOUNT,IDATE,IBULD
1,IROOMN,IROOMO,INSTRN
DO 30 M = 1,5
IBUILD(M) = IBUILD(M)
30 CONTINUE
IROOMN = IROOM
IROOMO = IROOM1
IF(INST(1).EQ.1H .AND.INST(2).EQ.1H .AND.INST(3).EQ.1H )GO TO 3
DO 31 M = 1,7
INSTRN(M) = INST(M)
31 CONTINUE
3 RETURN
END

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*JOBID,*CRTYP      MR. ARAM -TANTISOPONWANIS-
TITLECRTYP
C   PROGRAM FOR ANALYSIS OF CREDIT TYPE
C *** INPUT IS TAPE NO. 8 .. VARIABLE NAME IS ICOU, ICOJN, ITO, ICR
C *** OUTPUT IS PRINTER WHICH PRINT TABLE OF ALL CREDIT TYPE AND CUMULATIVE FOR
C   EACH CREDIT OF THE FACULTY OR INSTITUTE
C   VARIABLE NAME IS I, IA, IB, IC, ID, AND I, IFRE, ITOROW, ITOCOL, ITOTAL
C   DIMENSION IFAC1(14),IFAC2(14)
C   COMMON ITOTCR,ICRT(20,2),ICR(2),ICOU
C   COMMON IA,IB,IC,ID,IFRE(20,15),ITOROW(20),ITOCOL(15),ITOTAL
C   DATA IFAC1/100,150,200,250,300,350,400,450,500,550,600,650,700,750
C   1/
C   DATA IFAC2/149,199,249,299,349,399,449,499,549,599,649,699,749,799
C   1/
C *** BEFORE RUN THIS PROGRAM DATA TAPE INPUT MUST SORT MAJOR BY TOTAL CREDIT
C   AND MINOR BY COURSE NUMBER
C   WRITE(3,567)
567 FORMAT(1H0,10X,83H*** PLEASE PLACE TAPE IN DRIVE NO 8 ***** AFTE
IR THIS, PRESS RUN *** THANK YOU ***)
C   PAUSE
C   REWIND 8
C   CALL ICLEAR
C   WRITE(3,41)
41 FORMAT(1H1)
C   READ(8,4) ICOU,ICOJN,ITO,(ICR(I),I=1,2)
4   FORMAT(I3,I3,3X,I2,2I4)
C   IM = ICOU
C   IN = ICOJN
5   ITOTCR = ITO
C   ICRT(1,1) = ICR(1)
C   ICRT(1,2) = ICR(2)
C   I = 1
C   IMAX = 1
C   GO TO 8
3   READ(8,4) ICOU,ICOJN,ITO,(ICR(I),I=1,2)
C   CALL EOF(K)
C   IF(K.EQ.1) GO TO 50
C   IA = ICR(1)/100
C   IB = ICR(1) - 100*IA
C   IC = ICR(2)/100
C   ID = ICR(2) - 100*IC
C   IF(ITO.EQ.3.AND.ID.EQ.3) GO TO 6
C   ICRET = IA + IB + IC + ID
C   IF(ICRET.NE.ITO.OR.ICRET.EQ.0) GO TO 6
C   IF(ITOTCR.NE.ITO) GO TO 30
C   IF(ICOU.EQ.IM.AND.ICOJN.EQ.IN) GO TO 6
C   DO 7 I = 1,IMAX
C   IF(ICRT(I,1).EQ.ICR(1).AND.ICRT(I,2).EQ.ICR(2)) GO TO 8
7   CONTINUE
C   IF(IMAX.GE.20) GO TO 30
C   IMAX = IMAX + 1
C   ICRT(IMAX,1) = ICR(1)
C   ICRT(IMAX,2) = ICR(2)

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I = IMAX
8 DO 10 J = 1,14
  IF(I*ICOU.GE.IFAC1(J).AND.ICOU.LE.IFAC2(J))GO TO 9
10 CONTINUE
  IF(ICOU.EQ.93) J = 0
  J = J + 1
  IFRE(I,J) = IFRE(I,J) + 1
  IM = ICOU
  IN = ICOUN
  GO TO 6
C *** LOOP FOR PRINT ALL CREDIT TYPE OF EACH CREDIT
30 WRITE(3,31)
31 FORMAT(1H1, //52X, 26HCHJLALONGKORN UNIVERSITY//, 20X, 35HSUMMARIES
  1 REPORT OF CREDIT TYPE/)
  WRITE(3,32) ITOTCR
32 FORMAT(1H0, 20X, 20HNUMBER OF CREDIT ,13//, 34X, 34HNO., 23X, 13HCREDI
  1T TYPE/, 42X, 7HLECTURE, 6X, 10HLABORATORY, 6X, 8HPRACTICE, 6X, 5HOTHER/
  2)
  DO 33 I = 1, IMAX
    IA = ICRT(I,1)/100
    IB = ICRT(I,1) - 100*IA
    IC = ICRT(I,2)/100
    ID = ICRT(I,2) - 100*IC
    WRITE(3,34) I, IA, IB, IC, ID
34 FORMAT(1H0, 33X, 13, 6X, 14, 11X, 14, 11X, 14, 8X, 14/)
33 CONTINUE
  DO 35 I = 1, IMAX
    ITOROW(I) = 0
    DO 35 J = 1, 15
      ITOROW(I) = ITOROW(I) + IFRE(I,J)
35 CONTINUE
    ITOTAL = 0
    DO 36 J = 1, 15
      ITOCOL(J) = 0
      DO 36 I = 1, IMAX
        ITOCOL(J) = ITOCOL(J) + IFRE(I,J)
36 CONTINUE
    DO 20 J = 1, 15
      ITOTAL = ITOTAL + ITOCOL(J)
20 CONTINUE
C *** LOOP FOR PRINT CUMULATIVE COURSE FOR EACH CREDIT TYPE OF EACH FACULTY
  WRITE(3,37) ITOTCR
37 FORMAT(1H1, //52X, 26HCHJLALONGKORN UNIVERSITY//, 36X, 54HANALYSIS
  1THE FREQUENCY OF COURSE FOR CREDIT NO., 14/)
  ; WRITE(3,38)
38 FORMAT(7X, 122(14-))
  WRITE(3,39)
39 FORMAT(7X, 14I, 7X, 15(14I, 6X), 94I I)
  WRITE(3,40)
40 FORMAT(7X,
  9 1224I TYPE I 093 I 100 I 150 I 200 I 250 I 300 I 35
  10 I 400 I 450 I 500 I 550 I 600 I 650 I 700 I 750 I TOTAL
  2I/, 14, 6X, 1224I I I 149 I 199 I 249 I 299 I 349 I
  3 399 I 449 I 499 I 549 I 599 I 649 I 699 I 749 I 799 I
  4 I)
  WRITE(3,39)
  WRITE(3,38)
  WRITE(3,39)
  DO 42 I = 1, IMAX
    WRITE(3,43) I, (IFRE(I,J), J=1,15), ITOROW(I)
43 FORMAT(7X, 24I, 14, 3H I, 15, 14(24 I, 15), 24 I, 16, 24 I)

```



```

WRITE(3,39)
42 CONTINUE
WRITE(3,38)
WRITE(3,39)
WRITE(3,44) (ITOCOL(J),J=1,15),ITOTAL
44 FORMAT(7X,7H I TOTAL,15(2H I,15),2H I,16,2H I)
WRITE(3,39)
WRITE(3,39)
CALL ICLEAR
C *** CHECK END OF PROGRAM
IF(ITO.EQ.99) GO TO 100
GO TO 5
50 ITO = 99
GO TO 30
100 WRITE(3,41)
STOP
END
SUBROUTINE ICLEAR
COMMON ITOTCR,ICRT(20,2),ICR(2),ICDU
COMMON IA,IB,IC,ID,IFRE(20,15),ITOROW(20),ITOCOL(15),ITOTAL
DO 10 J = 1,15
DO 10 I = 1,20
IFRE(I,J) = 0
10 CONTINUE
DO 20 J = 1,2
DO 20 I = 1,20
ICRT(I,J) = 0
20 CONTINUE
RETURN
END

```

```

*JORID,*TEATY, MR. ARAM TANTISOPONJANISH
TITLETEATY
C *** INDJT IS TAPE NO. 8
C VARIABLE NAME IS ..ICDJ, ICOUN, ITO, IA, IB, IC, ID, IE, IF, IG, IH
C *** OUTPUT IS PRINTER WHICH PRINT TABLE OF ALL TEACHING TYPE AND CUMULATIVE
C FOR EACH CREDIT OF THE FACULTY OR INSTITUTE
C DIMENSION IFA1(14), IFA2(14)
COMMON ITOTCR, ITCA1(35), ITEA2(35), ITEA3(35), ITEA4(35), ITEA5(35), I
ITEA6(35), ITEA7(35), ITEA8(35)
COMMON IA, IB, IC, ID, IE, IF, IG, IH, ICDJ, ICOUN, ITO
COMMON IPRE(35,15), ITOROW(35), ITOCOL(15), ITOTAL
DATA IFA1/100,150,200,250,300,350,400,450,500,550,600,650,700,750/
DATA IFA2/149,199,249,299,349,399,449,499,549,599,649,699,749,799/
C *** BEFORE RUN THIS PROGRAM DATA TAPE INPUT MUST SORT MAJOR BY TOTAL CREDIT
C AND MINOR BY COURSE NUMBER
WRITE(3,567)
567 FORMAT(1H0,10X,83H*** PLEASE PLACE TAPE IN DRIVE NO 8 ***** AFTE
1R THIS PRESS RUN *** THANK YOU ***)
PAUSE
REWIND 8
WRITE(3,41)
41 FORMAT(1H1)
CALL CLEAR
READ(8,4) ICOU,ICOUN,ITO,IA,IB,IC,ID,IE,IF,IG,IH
4 FORMAT(I3,I3,3X,I2,8X,8I2)
IM = ICOU
IN = ICOUN
5 ITOTCR = ITO
I = 1
IMAX = 1
ITEA1(IMAX) = IA
ITEA2(IMAX) = IB
ITEA3(IMAX) = IC
ITEA4(IMAX) = ID
ITEA5(IMAX) = IE
ITEA6(IMAX) = IF
ITEA7(IMAX) = IG
ITEA8(IMAX) = IH
GO TO 8
6 READ(8,4) ICOU,ICOUN,ITO,IA,IB,IC,ID,IE,IF,IG,IH
CALL EOF(KK)
IF(KK.EQ.1) GO TO 50
ITTEA = IA + IB + IC + ID + IE + IF + IG + IH
IF(ITTEA.EQ.0) GO TO 6
IF(ITTEA.EQ.10.AND.ITO.EQ.2) GO TO 6
IF(ITOTCR.NE.ITO) GO TO 30
IF(ICOU.EQ.IM.AND.ICOUN.EQ.IN) GO TO 6
DO 7 I = 1,IMAX
IF(ITEA1(I).EQ.IA.AND.ITEA2(I).EQ.IB.AND.ITEA3(I).EQ.IC.AND.ITEA4(
1I).EQ.ID.AND.ITEA5(I).EQ.IE.AND.ITEA6(I).EQ.IF.AND.ITEA7(I).EQ.IG.
2AND.ITEA8(I).EQ.IH) GO TO 8
7 CONTINUE
IF(IMAX.GE.35) GO TO 30
IMAX = IMAX + 1

```

```

ITEA1(IMAX) = IA
ITEA2(IMAX) = IB
ITEA3(IMAX) = IC
ITEA4(IMAX) = ID
ITEA5(IMAX) = IE
ITEA6(IMAX) = IF
ITEA7(IMAX) = IG
ITEA8(IMAX) = IH
I = IMAX
8 DO 10 J = 1,14
  IF(ICOU.GE.IFA1(J).AND:ICOU.LE.IFA2(J)) GO TO 9
10 CONTINUE
  IF(ICOU.EQ.93) J = 0
9 J = J + 1
  IFRE(I,J) = IFRE(I,J) + 1
  IM = ICOU
  IN = ICOUN
  GO TO 6
C *** LOOP FOR PRINT ALL TEACHING TYPE OF EACH CREDIT
30 WRITE(3,31)
31 FORMAT(1H1,/,51X,25HCHULALONGKORN UNIVERSITY/,20X,37HSUMMARIES
1 REPORT OF TEACHING TYPE/)
  WRITE(3,32) ITOTCR
32 FORMAT(1H0,20X,20HNUMBER OF CREDIT ,13/,24X,34NO.,33X,15HTEACH
LING TYPE/,34X,7HLECTURE,3X,10HLABORATORY,3X,8HPRACTICE,3X,8HTUTO
RIAL,3X,6HSTUDIO,3X,8HLECT/LAB,3X,9HLECT/TUT,3X,5HOT-HER/)
  DO 33 I = 1,IMAX
  WRITE(3,34) I,ITEA1(I),ITEA2(I),ITEA3(I),ITEA4(I),ITEA5(I),ITEA6(I)
1),ITEA7(I),ITEA8(I)
34 FORMAT(1H0,22X,13,6X,14,8X,14,8X,14,8X,14,6X,14,8X,14,8X,14,5X,14)
33 CONTINUE
  DO 35 I = 1,IMAX
  ITOROW(I) = 0
  DO 35 J = 1,15
  ITOROW(I) = ITOROW(I) + IFRE(I,J)
35 CONTINUE
  DO 36 J = 1,15
  ITOCOL(J) = 0
  DO 36 I = 1,IMAX
  ITOCOL(J) = ITOCOL(J) + IFRE(I,J)
36 CONTINUE
  ITOTAL = 0
  DO 45 J = 1,15
  ITOTAL = ITOTAL + ITOCOL(J)
45 CONTINUE
C *** LOOP FOR PRINT CUMULATIVE COURSE FOR EACH TEACHING TYPE OF EACH FACULTY
  WRITE(3,37) ITOTCR
37 FORMAT(1H1,/,52X,25HCHULALONGKORN UNIVERSITY/,36X,54HANALYSIS
1THE FREQUENCY OF COURSE FOR CREDIT NO.,14/)
  WRITE(3,38)
38 FORMAT(7X,122(1H-))
  WRITE(3,39)
39 FORMAT(7X,1H1,7X,15(1H1,6X),9HI I)
  WRITE(3,40)
40 FORMAT(7X,122HI TYPE I 093 I 100 I 150 I 200 I 250 I 300 I
1 350 I 400 I 450 I 500 I 550 I 600 I 650 I 700 I 750 I TOT
2AL I/,7X,122HI I I 149 I 199 I 249 I 299 I 349 I
2399 I 449 I 499 I 549 I 599 I 649 I 699 I 749 I 799 I
3 I)
  WRITE(3,39)
  WRITE(3,38)

```

```

WRITE(3,30)
DO 42 J = 1,IMAX
WRITE(3,43) I,(IFRE(I,J),J=1,15),ITDROW(I)
43 FORMAT(7X,2H I,14,3H I,15,14(2H I,15),2H I,16,2H I)
WRITE(3,30)
42 CONTINUE
WRITE(3,36)
WRITE(3,30)
WRITE(3,44) (ITCOL(J),J=1,15),ITOTAL
44 FORMAT(7X,7H TOTAL,15(2H I,15),2H I,16,2H I)
WRITE(3,39)
WRITE(3,30)
CALL CLEAR
C *** CHECK END OF PROGRAM
IF(ITO.EQ.99) GO TO 100
GO TO 5
50 ITO = 99
GO TO 30
100 WRITE(3,41)
STOP
END
SUBROUTINE CLEAR
COMMON ITDTCR,ITFA1(35),ITFA2(35),ITFA3(35),ITFA4(35),ITFA5(35),I
ITFA6(35),ITFA7(35),ITCAR(35)
COMMON IA,IB,IC,ID,IE,IF,IG,IH,IJ,ICOL,ICOLN,ITO
COMMON IFRE(35,15),ITDROW(35),ITCOL(15),ITOTAL
DO 10 J = 1,15
DO 10 I = 1,35
IFRE(I,J) = 0
10 CONTINUE
DO 20 I = 1,35
ITFA1(I) = 0
ITFA2(I) = 0
ITFA3(I) = 0
ITFA4(I) = 0
ITFA5(I) = 0
ITFA6(I) = 0
ITFA7(I) = 0
ITCAR(I) = 0
20 CONTINUE
RETURN
END

```

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*JOBID,*FREQU      MR. ARAM TANTISOPONJANIS-
TITLEFREQU
C *** PROGRAM ANALYSIS FREQUENCY OF USED DATE OF EACH CREDIT
C *** INPUT IS TAPE NO. 8
C   NAME IS .. ICOJNO, ICRT, ICOJNT, IDATE
C   DATA CARD INPUT IS FACULTY NAME
C   DATA STATEMENT SET VALUE OF IFNO1,IFNO2 FOR COMPARE AND PRINT
C *** OUTPUT IS PRINTER WHICH PRINT TABLE OF FREQUENCY USED OF EACH CREDIT&TOTAL
C   NAME IS ICR, IDAT, IMATR, IROWS, ICOLS, IROWST
C   DIMENSION IDAT(7),IFAC(14,11),IFNO1(14),IFNO2(14)
C   COMMON IMATR(7,12),IDATE(15),ICOJNT
C   COMMON ICOJ,ICP,IROWST,ICOLST
C   COMMON IROWS(7),ICOLS(12)
C   DATA IDAT/24MO,2HTU,24WE,24TH,24FR,21SA,21SU/
C   DATA IFNO1/100,150,200,250,300,350,400,450,500,550,600,650,700,
1750/
C   DATA IFNO2/169,179,249,299,349,399,449,499,549,599,649,699,749,
1790/
C   WRITE(3,567)
567 FORMAT(1H0,10X,83H*** PLEASE PLACE TAPE IN DRIVE NO 8 ***** AFTE
1R THIS PRESS RJN *** THANK YOU ***)
C   PAUSE
C   REWIND 8
C   WRITE(3,41)
41 FORMAT(1H1)
C   DO 6 J = 1,12
C   DO 6 I = 1,7
C   IMATR(I,J) = 0
C   CONTINUE
C   READ(2,7) ((IFAC(I,J),J=1,11),I=1,7)
7 FORMAT(2(11A3,7X))
C   READ(8,15) ICOJNO,ICRT,ICOJNT, IDATE
C   IF(IDATE(1).EQ.0) GO TO 3
C   GO TO 11
C   READ(8,15) ICOJNO,ICRT,ICOJNT, IDATE
15 FORMAT(13,6X,12,24X,12,15I3)
C   CALL EOF(KK)
C   IF(KK.EQ.1) GO TO 1000
C   IF(IDATE(1).EQ.0) GO TO 2
C *** LOOP FOR FINDING FACULTY
C   DO 35 IA=1,14
C   IF(ICOJNO.GE.IFNO1(IA).AND.ICOJNO.LE.IFNO2(IA)) GO TO 4
35 CONTINUE
C   IA = 14
C   IF(ICR.NE.ICRT)GO TO 12
C   IF(IFN.EQ.IA) GO TO 14
C *** PRINTING HEADING
12 WRITE(3,5)
5 FORMAT(1H17///,44X,33HFREQUENCY USED OF EACH CREDIT//47X,27HCH
1ULALONGKORN UNIVERSITY/)
C   WRITE(3,45) (IFAC(IFN,J),J=1,11)
45 FORMAT(19X,12HFACULTY OF ,11A3/)
C *** LOOP FOR PRINTING FREQUENCY USE DATE OF EACH CREDIT
C   WRITE(3,25)ICR
25 FORMAT(20X,12,8H CREDIT:36X,7HT I M E)
C   WRITE(3,26)

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26 FORMAT(10X,14(8-I*****),14H)
   WRITE(3,27)
27 FORMAT(10X,14(1-I,7X),14H)
   WRITE(3,28)
28 FORMAT(10X,1134H DAY I 08-09 I 09-10 I 10-11 I 11-12 I 12-13 I 1
13-14 I 14-15 I 15-16 I 16-17 I 17-18 I 18-19 I 19-20 I TOTAL I)
   WRITE(3,27)
   WRITE(3,24)
   WRITE(3,27)
   DO 10 I=1,7
     IROWS(I) = 0
10 CONTINUE
   DO 20 J=1,12
     ICOLS(J) = 0
20 CONTINUE
   DO 30 I = 1,7
     DO 30 J = 1,12
       IROWS(I) = IROWS(I) + IMATR(I,J)
30 CONTINUE
   DO 40 J = 1,12
     DO 40 I = 1,7
       ICOLS(J) = ICOLS(J) + IMATR(I,J)
40 CONTINUE
   IROWST = 0
   DO 50 I = 1,7
     IROWST = IROWST + IROWS(I)
50 CONTINUE
   DO 61 I = 1,7
     WRITE(3,80) I, (IMATR(I,J), J=1,12), IROWS(I)
80 FORMAT(10X,34H ,A2,6H I,13(15,34 I))
   WRITE(3,27)
61 CONTINUE
   WRITE(3,26)
   WRITE(3,27)
   WRITE(3,82) (ICOLS(J), J=1,12), IROWST
82 FORMAT(10X,94H TOTAL I,13(15,34 I))
   WRITE(3,27)
   WRITE(3,26)
   IF (ICRT.EQ.99) GO TO 100
   DO 60 J = 1,12
     DO 60 I = 1,7
       IMATR(I,J) = 0
60 CONTINUE
11 ICR = ICRT
   ICNJ = ICJND
   DO 70 IA = 1,14
     IF (ICOMNO.GE.IFN01(IA).AND.ICOUN).LE.IFN02(IA)) GO TO 71
70 CONTINUE
71 IF1 = IA
14 CALL IMATAD
   GO TO 2
1000 ICRT = 99
   GO TO 12
100 WRITE(3,41)
   STOP
   END
   SUBROUTINE IMATAD
   COMMON IMATR(7,12),IDATE(15),ICOUNT
   DO 10 I = 1,ICOUNT
     J = IDATE(I)/100
     K = IDATE(I) - 100*J
     IMATR(J,K) = IMATR(J,K) + 1
10 CONTINUE
   RETURN
   END

```



```

*JOBID,*EJECT          MR. ARAM TANTISOPONJANISH
C *** PROGRAM FOR EJECT ABOUT * BUILDING OR ROOM IS AR OR INSTRUCTOR IS STAFF
C   AND AR OR DATE IS ZERO
C *** INPUT IS TAPE OUTPUT FROM PROGRAM **ARTAP **
C *** OUTPUT IS TAPE AND PRINTER ** TAPE IS TRANSFER FROM INPUT WHICH CANCEL
C   THE CASE BUILDING OR ROOM IS AR OR INSTRUCTOR IS STAFF
C   OR AR OR DATE IS ZERO
C   PRINTER IS INFORMATION ABOUT RECORD WHICH CANCEL FROM TAPE
C *** BEFORE RUN THIS PROGRAM MUST SORT TAPE INPUT MAJOR BY COURSE NUMBER
    DIMENSION ICOUN(2),ICRT(4),ITEAHR(3),IDATE(15),IBULD(2),INSTRN(3)
    PAUSE
    REWIND 7
    REWIND 3
C *** WRITING HEADING OF PRINTER OUTPUT
    WRITE(3,1)
    1 FORMAT(1H1,///12X,107H*** DATA ABOUT THE CASE BUILDING OR RO
    10M IS AR OR INSTRUCTOR IS STAFF OR AR OR DATE ZERO ***)
    I = 100
C *** READING TAPE INPUT FROM TAPE DRIVE NO. 7
    3 READ(7,11) ICOUN,ISECTN,ITY>,ITOTCR,ICRT,ITEAHR,ICOUNT,IDATE,IRULD
    1,IROOMN,IROOMO,INSTRN
    11 FORMAT(2I3,I2,I1,14I2,15I3,A2,A3,A3,A2,2A3,A1)
C --- CHECK FOR END OF TAPE FILE
    CALL EOF(K)
    IF(K.EQ.1) GO TO 100
C *** CHECK FOR THE CASE BUILDING OR ROOM IS AR OR INSTRUCTOR IS STAFF
C   AND AR OR DATE IS ZERO
    IF( (IBULD(1).EQ.2HAR.AND. (IBULD(2).EQ.3H ) GO TO 5
    IF( (IROOMN.EQ.3H .AND. (IROOMO.EQ.2HAR) GO TO 5
    IF( (IBULD(1).EQ.2H .AND. (IBULD(2).EQ.3H .AND. (IROOMO.EQ.2H ) GOTO 5
    IF( (INSTRN(1).EQ.3H5TA.AND. (INSTRN(2).EQ.3HFF ) GO TO 5
    IF( (INSTRN(1).EQ.3HAR .AND. (INSTRN(2).EQ.3H ) GO TO 5
    IF( (IDATE(1).EQ.0 .OR. (ICOUNT.EQ.0) GO TO 5
    WRITE(8,11) ICOUN,ISECTN,ITY>,ITOTCR,ICRT,ITEAHR,ICOUNT,IDATE,IRULD
    1,IROOMN,IROOMO,INSTRN
    GO TO 3
C *** CHECK FACULTY CODE FOR SKIP TO NEW PAGE
    5 IF( (ICOUN(1).LT.1) GO TO 10
    WRITE(3,1)
    I = I + 50
    10 WRITE(3,12) ICOUN,ISECTN,ITY>,ITOTCR,ICRT,ITEAHR,ICOUNT,IDATE,IRULD
    1,IROOMN,IROOMO,INSTRN
    12 FORMAT(1H ,15,14,13,I2,9I3,2I2,3I3,10I4,5I3,A2,2A3,A2,3A3)
    GO TO 3
100 WRITE(3,13)
    13 FORMAT(1H1,///20X,64H*** END OF PROGRAM EJECT *** THANK YOU ***)
    END FILE 0
    REWIND 7
    REWIND 8
    STOP
    END

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*JOBID*CLASS      IR. ARAM TANTISOPONNANISH
TITLECLASS
C *** PROGRAM ANALYSIS OF CLASSROOM UTILIZATION
C *** INPUT IS TAPE NO. 3
C   VARIABLE NAME IS ICONF, ISEC, ICONF, IDATE, IBUILD, IROOM, IROOM1
C   DATA CARD INPUT IS FACULTY NAME
C   DATA STATEMENT SET VALUE OF ICONF1, ICONF2 AND DAYS FOR USE TO COMPARE, PRINT
C *** OUTPUT IS PRINTER WHICH PRINT SCHEDULE TABLE OF BUILDING AND ROOM & ERROR
C   NAME IS . IDAYS, IMAT1, IMAT2, IMAT3, IER1, IER2, IER3, IBUILD, IROOMN,
C   IROOM1
C *** BEFORE RUN THIS PROGRAM MUST SORT TAPE INPUT MAJOR BY BUILDING AND ROOM
DIMENSION ICONF(14), ICONF2(14), IFAC(14,10)
DIMENSION IDAYS(7), ITOT(7), IBUILD(2), IBUILD(2)
COMMON ICONF(2), ICONF, IDATE(15), ISEC
COMMON IMAT1(7,12), IMAT2(7,12), IMAT3(7,12)
COMMON IER1(5), IER2(5), IER3(5)
COMMON L
DATA ICONF/19, 15, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700,
1750/
DATA ICONF2/149, 199, 249, 299, 349, 399, 449, 499, 549, 599, 649, 699, 749,
1799/
DATA IDAYS/24D, 24TU, 24WE, 24TH, 24FR, 24SA, 24SU/
WRITE(3,567)
567 FORMAT(1H0,10X,834*** PLEASE PLACE TAPE IN DRIVE NO 8 ***** AFTE
IR THIS PRESS RUN *** THANK YOU ***)
PAUSE
REWIND 8
L = 0
NO = 0
WRITE(3,41)
41 FORMAT(1H1)
READ(2,4) ((IFAC(I,J), J=1,10), I=1,14)
4 FORMAT(2(10A3,10X))
CALL ICLEAR
READ(8,5) ICONF, ISEC, ICONF, IDATE, IBUILD, IROOM, IROOM1
GO TO 22
3 READ(8,5) ICONF, ISEC, ICONF, IDATE, IBUILD, IROOM, IROOM1
5 FORMAT(I3, I3, I2, 27X, I2, 15I3, A2, A3, A3, A2)
C *** CHECK END OF PROGRAM
CALL EOF(KK)
IF(KK.EQ.1) GO TO 30
IF(IBUILD(1).NE.IBUILD(1).OR.IBUILD(2).NE.IBUILD(2)) GO TO 8
IF(IROOMN.NE.IROOM.OR.IROOMD.NE.IROOM1) GO TO 8
GO TO 25
3 WRITE(3,27)
27 FORMAT(1H1///)
C *** PRINTING HEADINGS
WRITE(3,29)
29 FORMAT(39X,40H ANALYSIS OF CLASSROOM UTILIZATION//,48X,27HCH
LULALONGKORN UNIVERSITY//)
WRITE(3,10) (IFAC(IFN,J), J=1,10)
10 FORMAT(20X,13HFACULTY OF ,10A3//)
WRITE(3,11) (IBUILD(J), J=1,2), IROOMN, IROOMD
11 FORMAT(20X,10HBUILDING ,2X, A2, A3, 10X, 10HROOM NO. ,2A3//)
C *** LOOP FOR PRINTING TABLE OF CLASSROOM UTILIZATION FOR EACH CLASSROOM
WRITE(3,12).

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12 FORMAT(4X,125(14*))
   WRITE(3,13)
13 FORMAT(4X,14I,7X,12(14I,8X),14I,7X,14I)
   WRITE(3,14)
14 FORMAT(4X,1254I DAY I 09-09 I 09-10 I 10-11 I 11-12 I 12-13
1 I 13-14 I 14-15 I 15-16 I 16-17 I 17-18 I 18-19 I 19-20 I
2TOTAL I)
   WRITE(3,13)
   WRITE(3,17)
   WRITE(3,13)
   DO 50 I = 1,7
     ITOT(I) = 0
     DO 50 J = 1,12
       IF(IMATR1(I,J).EQ.0) GO TO 50
       ITOT(I) = ITOT(I) + 1
50 CONTINUE
   DO 18 I = 1,7
     WRITE(3,16) IDAYS(I),(IMATR1(I,J),IMATR2(I,J),J=1,12),ITOT(I)
16 FORMAT(4X,14I,4F,2X,14I,12(I4,I3,2+ I),15,34 I)
     WRITE(3,17) (IMATR3(I,J),J=1,12)
17 FORMAT(4X,14I,7X,14I,12(I5,4+ I),7X,14I)
     WRITE(3,13)
18 CONTINUE
   WRITE(3,12)
   IF(L.EQ.0)GO TO 20
C *** PRINTING ERROR INFORMATION OF DATE AND COURSE NUMBER
   WRITE(3,19) (IER1(I),IER2(I),IER3(I),I=1,L)
19 FORMAT(/5X,24HERROR INFORMATION IS ***,5(I5,I5,I4,4H ***)
   L = 0
20 WRITE(3,21)
21 FORMAT(1H?)
   CALL ICLEAR
C *** CHECK END OF PROGRAM
   IF(NO.EQ.100)GO TO 40
22 IBULD(1) = IBUILD(1)
   IBULD(2) = IBUILD(2)
   IROOMN = IROOM
   IROOMO = IROOM1
   ICOJ = ICOUNO(1)
C *** LOOP FOR FINDING FACULTY
   DO 23 I = 1,14
     IF(ICOUN.GE.ICOUN1(I).AND.ICOJ.LE.ICOUN2(I)) GO TO 24
23 CONTINUE
24 IFN = I
25 DO 100 K = 1,ICOJNT
   I = IDATE(K)/100
   J = IDATE(K) - 100*I
   IF(IMATR1(I,J).NE.0) GO TO 6
   IMATR1(I,J) = ICOJNO(1)
   IMATR2(I,J) = ICOJNO(2)
   IMATR3(I,J) = ISEC
   GO TO 100
6 IF(L.GE.5) GO TO 100
   L = L + 1
   IER1(L) = 100*I + J
   IER2(L) = ICOUNO(1)
   IER3(L) = ICOUNO(2)
100 CONTINUE
   GO TO 3
30 NO = 100
   GO TO 8
40 WRITE(3,41)
   STOP
   END
   SURROUTINE ICLEAR
   COMMON ICOJNO(2),ICOJNT,IDATE(15),ISEC
   COMMON IMATR1(7,12),IMATR2(7,12),IMATR3(7,12)
   COMMON IER1(5),IER2(5),IER3(5)
   COMMON L
   DO 60 N = 1,12
     DO 60 M = 1,7
       IMATR1(M,N) = 0
       IMATR2(M,N) = 0
70 IMATR3(M,N) = 0
     DO 70 I = 1,5
       IER1(I) = 0
       IER2(I) = 0
       IER3(I) = 0
   RETJRN
   END

```

```

*JOBID,*INSTR          MR. ARAM TANTISOPONJANISH
TITLEINSTR
C *** INPJT IS TAPE NO. 8
C DATA CARD INPUT IS FACULTY NAME
C DATA STATEMENT SET VALUE OF IFA1,IFA2,IDAY FOR COMPARE AND PRINT
C NAME IS .. IC01, IC02, ISEC, ICOJNT, IDATE, IBUILD, IROOM, IROOM1, INST
C *** OUTPUT IS PRINTER WHICH PRINT TABLE OF TEACHER UTILIZATION AND ERROR
C NAME IS IDAY, ITEAU1 - 7, ITOT, IERR1 - 3
C *** BEFORE RUN THIS PROGRAM MUST SORT TAPE INPJT MAJOR BY INSTRUCTOR NAME
DIMENSION IFA1(14),IFA2(14),IDAY(7),IFACN(14,10),ITOT(7)
COMMON IC01,IC02,ISEC,ICOJNT,IDATE(15),IBUILD(2),IROOM,INST(3)
COMMON IROOM1,ITEAU7(7,12)
COMMON ITEAU1(7,12),ITEAU2(7,12),ITEAU3(7,12),ITEAU4(7,12),ITEAU5
1(7,12),ITEAU6(7,12),IERR1(5),IERR2(5)
COMMON INSTN(3),L
COMMON IERR3(5)
DATA IFA1/100,150,200,250,300,350,400,450,500,550,600,650,700,750/
DATA IFA2/149,199,249,299,349,399,449,499,549,599,649,699,749,799/
DATA IDAY/2440,2441,2442,2443,2444,2445,2446/
WRITE(3,567)
567 FORMAT(1H0,10X,83H*** PLEASE PLACE TAPE IN DRIVE NO 8-***** AFTE
IR THIS PRESS RUN *** THANK YOU ***)
PAUSE
REWind 8
CALL ICLEAR
L = 0
WRITE(3,41)
41 FORMAT(1H1)
READ(2,99) ((IFACN(I,J),J=1,10),I=1,14)
99 FORMAT(2(10A3,10X))
5 READ(8,4) IC01,IC02,ISEC,ICOJNT,IDATE,IBUILD,IROOM,IROOM1,INST
4 FORMAT(13,13,12,27X,12,15I3,A3,A2,A3,A2,2A3,A1)
IF(INST(1).EQ.34 .AND.INST(2).EQ.34 ) GO TO 130
3 INSTN(1) = INST(1)
INSTN(2) = INST(2)
INSTN(3) = INST(3)
C *** LOOP FOR FINDING FACULTY
DO 10 I = 1,14
IF(IC01.GE.IFA1(I).AND.IC01.LE.IFA2(I)) GO TO 11
10 CONTINUE
I = 14
11 IFN = I
50 DO 60 K = 1,ICOJNT
I = IDATE(K)/100
J = IDATE(K) - 100*I
IF(ITEAU1(I,J).NE.0) GO TO 31
ITEAU1(I,J) = IC01
ITEAU2(I,J) = IC02
ITEAU3(I,J) = ISEC
ITEAU4(I,J) = IBUILD(1)
ITEAU5(I,J) = IBUILD(2)
ITEAU6(I,J) = IROOM
ITEAU7(I,J) = IROOM1
GO TO 60

```

```

51 IF(L.EQ.5) GO TO 50
   L = L + 1
   IERR1(I) = IERR1 + J
   IERR2(L) = IC01
   IERR3(L) = IC02
60 CONTINUE
   READ(8,4) IC01, IC02, ISEC, ICOUNT, IDATE, IBUILD, IROOM, IROOM1, INST
   CALL EOP(KC)
   IF(KK.EQ.1) GO TO 50
   IF(INST(1).EQ.INST1(1).AND.INST(2).EQ.INST1(2).AND.INST(3).EQ.INST
IN(3)) GO TO 50
30 WRITE(3,20)
20 FORMAT(14I///,37X,50HT)TEACHER UTILIZATION FOR CHULALONGKORN UNI
IVERSITY//)
   WRITE(3,21) (IFACH(I,J),J=1,10), (INSTN(J),J=1,3)
21 FORMAT(30X,13HFACULTY OF ,10A3,20H INSTRUCTOR NAME ,3A3//,62X
1,9HT I * = S/)
C *** LOOP FOR PRINTING TABLE OF TEACHER UTILIZATION
   WRITE(3,22)
22 FORMAT(4X,124(1H*))
   WRITE(3,23)
23 FORMAT(4X,34H      I,12(8X,14H),3H      I)
   WRITE(3,24)
24 FORMAT(4X,124H1 DAYS I 08-09 I 09-10 I 10-11 I 11-12 I 12-13
1I 13-14 I 14-15 I 15-16 I 16-17 I 17-18 I 18-19 I 19-20 I T
TOTAL I)
   WRITE(3,25)
   WRITE(3,26)
   WRITE(3,27)
   DO 25 I = 1,7
   ITOT(I) = 0
   DO 40 J = 1,12
   IF(ITEAU1(I,J).EQ.0) GO TO 40
   ITOT(I) = ITOT(I) + 1
40 CONTINUE
   WRITE(3,26) IDAY(I), (ITFAU1(I,J),ITEAU2(I,J),J=1,12), ITOT(I)
26 FORMAT(4X,34H      ,43,1X,12(14H,14,14),34H      ,14,24H I)
   WRITE(3,27) (ITEAU3(I,J),J=1,12)
27 FORMAT(4X,34H      ,12(64 I ,13),41 I,7X,14H)
   WRITE(3,28) (ITEAU4(I,J),ITEAU5(I,J),J=1,12)
28 FORMAT(4X,124H      I ,12(43,43,34H      ),54 I)
   WRITE(3,29) (ITEAU6(I,J),ITEAU7(I,J),J=1,12)
29 FORMAT(4X,74H      I :12(43,43,34H      ),74 I)
   WRITE(3,23)
25 CONTINUE
   WRITE(3,22)
   IF(L.EQ.5) GO TO 30
C *** PRINTING ERROR INFORMATION OF DATE AND ROOM
   WRITE(3,31) (IERR1(IA), IERR2(IA), IERR3(IA), IA=1,L)
31 FORMAT(///19X,30H*** ERROR INFORMATION IS ***,5(215,14,5H *** ))
   L = 0
39 CALL ICLEAR
   IF(IC01.EQ.0) GO TO 100
   GO TO 3
130 WRITE(3,131) IC01, IC02, ISEC, ICOUNT, IDATE, IBUILD, IROOM, IROOM1, INST
131 FORMAT(54H      ,14, 4,13,13,1514,7A3,25H INSTRUCTOR IS BLANK **)
   GO TO 3
140 IC01 = 0
   GO TO 3
100 WRITE(3,41)
   STOP
   END
SUBROUTINE ICLEAR
COMMON IC01, IC02, ISEC, ICOUNT, IDATE(15), IBUILD(2), IROOM, INST(3)
COMMON IC03(1), ITEAU7(7,12)
COMMON ITFAU1(7,12), ITEAU2(7,12), ITEAU3(7,12), ITEAU4(7,12), ITEAU5
1(7,12), ITEAU6(7,12), IERR1(5), IERR2(5)
COMMON INST1(3), L
COMMON IERR3(5)
DO 10 J = 1,12
DO 10 I = 1,7
ITEAU1(I,J) = 0
ITEAU2(I,J) = 0
ITEAU3(I,J) = 0
ITEAU4(I,J) = 34
ITEAU5(I,J) = 34
ITEAU6(I,J) = 34
ITEAU7(I,J) = 34
10 CONTINUE
DO 20 I = 1,5
IERR1(I) = 0
IERR2(I) = 0
IERR3(I) = 0
20 CONTINUE
RETURN
END

```



```

*JOBID*PRINT      MR. ARAM TANTIBOPONJANISH
*JOBID*ASSIGN 7 TO TAPE,R200
C   PROGRAM FOR PRINTING CLASS SCHEDULES
COMMON INDEX(200)
COMMON IFAC(40),IDEPT(60),IDASH(60)
COMMON ICOL(2),ICOUNA(6),ICRTYP(56),IEXAM,I1,I2,INC,NO,N,I
COMMON IPRER(44)
COMMON ISEC,ITYPT(2),IDAY(5),ITIME(3),IBULD(2),IROOM(2),INST(3),
IREMAK(60)
WRITE(3,567)
567 FORMAT(1H0,10X,23H*** PLEASE PLACE TAPE IN DRIVE NO 5 AND 7  AFTE
IR THIS PRESS RUN *** THANK YOU ***)
PAUSE
C *** CHECK HEADER OF TAPE INPUT
566 READ(6,459) IV,IW,IX,IY,IZ
458 FORMAT(A1,A2,15X,3A3)
IF(IV.NE.1H1.OR.IW.NE.3H3DR.OR.IX.NE.3H5SCH.OR.IZ.NE.3H1ES)GO TO571
777 READ(7,459) IV,IW,IX,IY,IZ
IF(IV.NE.1H1.OR.IW.NE.3H3DR.OR.IX.NE.3H5SCH.OR.IZ.NE.3H1ES)GO TO572
WRITE(3,241)
NO = 0
DO 90 IA = 1,60
90 IREMAK(IA) = 3H
DO 100 IA = 1,44
100 IPRER(IA) = 3H
5 I = 0
C *** READING DATA TAPE OF INDEX ( CARD CODE )
READ(7,2) INDEX
2 FORMAT(200I1)
3 I = I + 1
C *** CHECK END OF PROGRAM AND END OF INDEX ARRAY
IF(I - 200)1,1,5
1 IND = INDEX(I)
IF(IND.EQ.9) GO TO 1000
GO TO (10,20,30,40,50,60),IND
C *** READING TAPE INPUT OF DATA CARD PRINT HEADING AND FACULTY NAME
10 READ(6,6) IFAC
6 FORMAT(3X,60A1)
WRITE(3,80)
80 FORMAT(1H1///,50X,16HCLASS SCHEDULES,///5X,19HNO COURSE-NO SECT,
112X,4HDAYS,11X,4HTIME,5X,4HBLDG,5X,17HROOM INSTRUCTOR,6X,7HREMAR
2KS,9X,16HEXAM DATE CHECK//)
NO = 1
DO 4 IA = 1,38
IF(IFAC(IA).EQ.1H .AND. IFAC(IA+1).EQ.1H .AND. IFAC(IA+2).EQ.1H ) GO
1TO 7
4 CONTINUE
7 N = IA -1
DO 11 IA=1,N
IDASH(IA) = 1H#
11 CONTINUE
WRITE(3,8) (IDASH(IA),IA=1,N)
8 FORMAT(6X,60A1)
WRITE(3,8) IFAC
WRITE(3,8) (IDASH(IA),IA=1,N)
GO TO 3
C *** READING TAPE INPUT OF DATA CARD PRINT HEADING AND DEPARTMENT

```



```

20 NO = NO + 1
   READ(6,6) IDEPT
   INC = 0
   DO 22 IA = 1,58
   IF(IDEPT(IA).EQ.1H .AND. IDEPT(IA+1).EQ.1H .AND. IDEPT(IA+2).EQ.1H )
   IGO TO 23
22 CONTINUE
23 N = IA + 1
   DO 24 IA = 1,N
   IDASH(IA) = 1H-
24 CONTINUE
   IF(NO = 23) 26,26,25
25 WRITE(3,80)
   NO = 1
26 IF(IDEPT(1).EQ.1HD.AND. IDEPT(2).EQ.1HE.AND. IDEPT(3).EQ.1HP) GO TO
   1126
   NO = NO + 1
   N = N - 2
   WRITE(3,12)
12 FORMAT(1H0)
   WRITE(3,8) IDEPT
   WRITE(3,8) (IDASH(IA),IA=1,N)
   GO TO 3
126 NO = NO + 1
   WRITE(3,12)
   WRITE(3,128) (IDEPT(IA),IA=5,N)
128 FORMAT(6X,6HDEPT: ,35A1)
   WRITE(3,8) (IDASH(IA),IA=1,N)
   GO TO 3
C *** READING TAPE INPUT OF DATA CARD CODE FOUR
40 READ(6,41) I1,I2,ICRTYP,IXAM
41 FORMAT(7X,A1,A1,4X,56A1,A3)
   INC = INC + 1
   IF(I1.EQ.1H0) I1 = 1H
   DO 70 IA = 1,56
   IF(ICRTYP(IA).NE.1H%) GO TO 441
   ICRTYP(IA) = 1H(
   GO TO 70
441 IF(ICRTYP(IA).NE.1H ) GO TO 442
   ICRTYP(IA) = 1H+
   GO TO 70
442 IF(ICRTYP(IA).NE.1H") GO TO 70
   ICRTYP(IA) = 1H)
70 CONTINUE
   GO TO 3
C *** READING TAPE INPUT OF DATA CARD CODE FIVE
50 IF(IPRER(1).NE.3H ) GO TO 52
   READ(6,51) (IPRER(IA),IA=1,22)
51 FORMAT(7X,21A3,A2)
   GO TO 3
52 READ(6,51) (IPRER(IA),IA=23,44)
   GO TO 3
C *** READING TAPE INPUT OF DATA CARD CODE SIX
60 READ(6,61) IREMAK
61 FORMAT(7X,60A1)
   DO 65 IA = 1,60
   IF(IREMAK(IA).NE.1H%) GO TO 62
   IREMAK(IA) = 1H(
   GO TO 65
62 IF(IREMAK(IA).NE.1H") GO TO 65
   IREMAK(IA) = 1H)

```

```

65 CONTINUE
GO TO 3
C *** READING TAPE INPUT OF DATA CARD CODE THREE
30 READ(6,31) ICOU,ICOUNA,ITYPT,ISEC,ITIME,IDAY,IROOM,IBULD,INST
31 FORMAT(2X,A3,1X,8A3,A1,2X,4A3,5A2,A3,2A2,3A3,A1)
CALL EOF(K)
IF(K.EQ.1) GO TO 1000
CALL IPRNT
GO TO 3
571 WRITE(3,459) IV,IA,IX,IY,IZ
BACKSPACE 6
PAUSE 1
GO TO 666
572 WRITE(3,459) IV,IA,IX,IY,IZ
459 FORMAT(1H0,20X,25H***ERROR HEADER TAPE IS ,A1,A3,16X,3A3,10X,
137H***PLEASE PLACE THE RIGHT TAPE***)
BACKSPACE 7
PAUSE 2
GO TO 777
1000 WRITE(3,241)
241 FORMAT(1H1)
REWIND 6
REWIND 7
STOP
END
SUBROUTINE IPRNT
COMMON INDEX(200)
COMMON IPAC(40),IDEPT(60),IDASH(60)
COMMON ICOU(2),ICOUNA(5),ICRTYP(56),IEXAM,I1,I2,INC,NO,N,I
COMMON IPRER(44)
COMMON ISEC,ITYPT(2),IDAY(5),ITIME(3),IBULD(2),IROOM(2),INST(3),
IIREMAK(60)
C *** LOOP FOR CHECKING PRINTING TYPE
IF(ICRTYP(1).EQ.1H .AND. ICRTYP(2).EQ.1H .AND. ICRTYP(3).EQ.1H .AND.
IPRER(1).EQ.3H ) GO TO 32
IF(IPRER(1).EQ.3H ) GO TO 33
C *** LOOP FOR PRINTING CLASS SCHEDULES TYPE ONE
NO = NO + 1
IF(NO = 21)45,45,44
44 WRITE(3,80)
80 FORMAT(1H1///,50X,16HCLASS SCHEDULES,///5X,19HNO COURSE NO SECT,
112X,4HDAYS,11X,4HTIME,6X,4HBLDG,5X,17HROOM INSTRUCTOR,6X,7HREMAR
2KS,9X,16HEXAM DATE CHECK//)
NO = 1
45 IF(I2.EQ.1H1.OR.I2.EQ.1H0) GO TO 145
WRITE(3,140) INC,ICOU,ICOUNA,I1,I2,ICRTYP,IEXAM
140 FORMAT(1H0,18,2X,A3,1H-,A3,3X,6A3,2A1,15H CREDIT HOURS =,56A1,2X,
1A3)
GO TO 142
145 WRITE(3,144) INC,ICOU,ICOUNA,I1,I2,ICRTYP,IEXAM
144 FORMAT(1H0,18,2X,A3,1H-,A3,3X,6A3,2A1,15H CREDIT HOUR =,56A1,2X,
1A3)
142 NO = NO + 1
WRITE(3,43) (IPRER(IA),IA=1,22)
43 FORMAT(1H0,20X,22A3)
IF(IPRER(23).EQ.3H .AND. IPRER(24).EQ.3H ) GO TO 155
NO = NO + 1
WRITE(3,43) (IPRER(IA),IA=23,44)
155 NO = NO + 1
WRITE(3,37) ISEC,ITYPT,IDAY,ITIME,IBULD,IROOM,INST,(IIREMAK(IA),IA=
11,20)

```

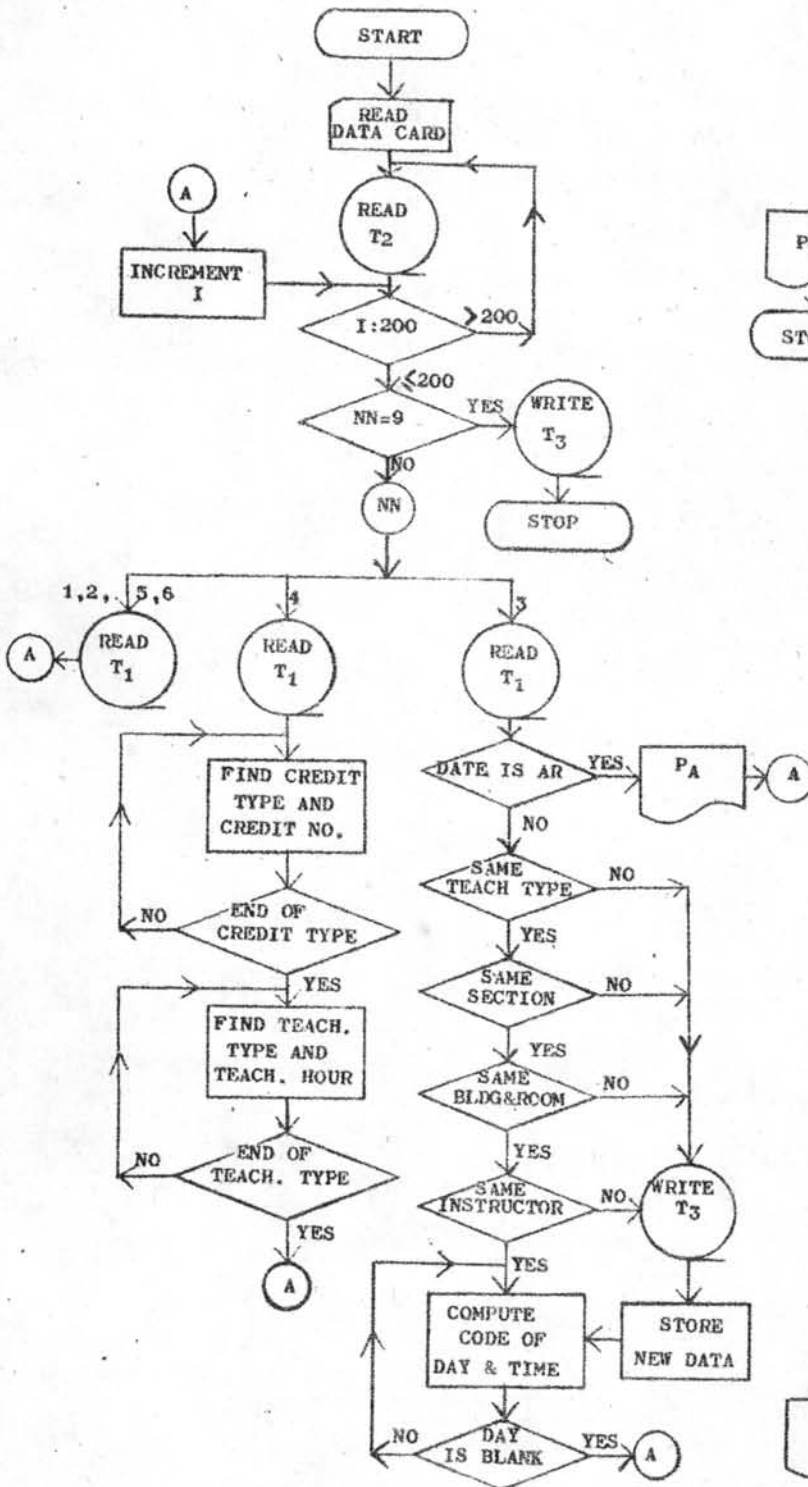
```

37 FORMAT(1H0,21X,A3,3X,2A3,5A3,1X,3A3,3X,A2,A3,2X,2A3,4X,3A3,20A1)
   IB = 0
   GO TO 990
C *** LOOP FOR PRINTING CLASS SCHEDULES TYPE TWO
32 NO = NO + 1
   IF (ISEC.NF.3H .AND.NO.GE.24) GO TO 35
   IF (NO = 24)36,36,35
35 WRITE(3,80)
   NO = 1
36 WRITE(3,37) ISEC,ITYPT,TDAY,ITIME,IBULD,IROOM,INST,(IREMAK(IA),IA=
11,20)
   IB = 0
   GO TO 990
C *** LOOP FOR PRINTING CLASS SCHEDULES TYPE THREE
33 NO = NO + 1
   IF (NO = 23)39,39,38
38 WRITE(3,80)
   NO = 1
39 IF (I2.EQ.141.OR.I2.EQ.140) GO TO 139
   WRITE(3,140) INC,ICOU,ICOUNA,11,I2,ICRTYP,IEXAM
   GO TO 143
139 WRITE(3,144) INC,ICOU,ICOUNA,11,I2,ICRTYP,IEXAM
143 NO = NO + 1
   WRITE(3,37) ISEC,ITYPT,TDAY,ITIME,IBULD,IROOM,INST,(IREMAK(IA),IA=
11,20)
   IB = 0
990 IB = IB + 1
   IC = 20*IB + 1
   IF (IREMAK(IC).EQ.14 .AND.IREMAK(IC-1).EQ.14 ) GO TO 99
   NO = NO + 1
   ID = IC + 19
   IF (ID.GT.60) ID = 60
   WRITE(3,137) (IREMAK(IA),IA=IC,ID)
137 FORMAT(1H0,88X,20A1)
   GO TO 990
99 DO 10 IA = 1,56
10 ICRTYP(IA) = 34
   DO 20 IA = 1,44
20 IPRER(IA) = 3H
   DO 40 IA=1,60
40 IDASH(IA) = 3H
40 IREMAK(IA) = 34
   RETJRN
   END

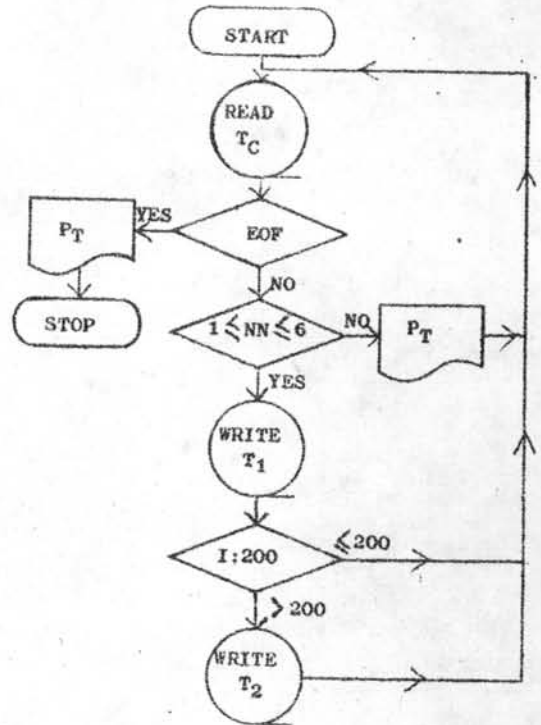
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FLOWCHARTS

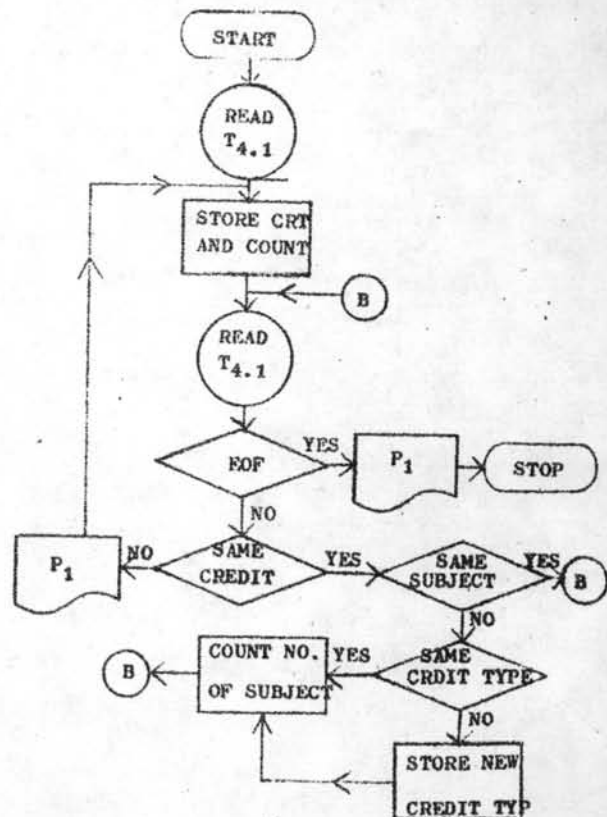
PROGRAM ARTAP



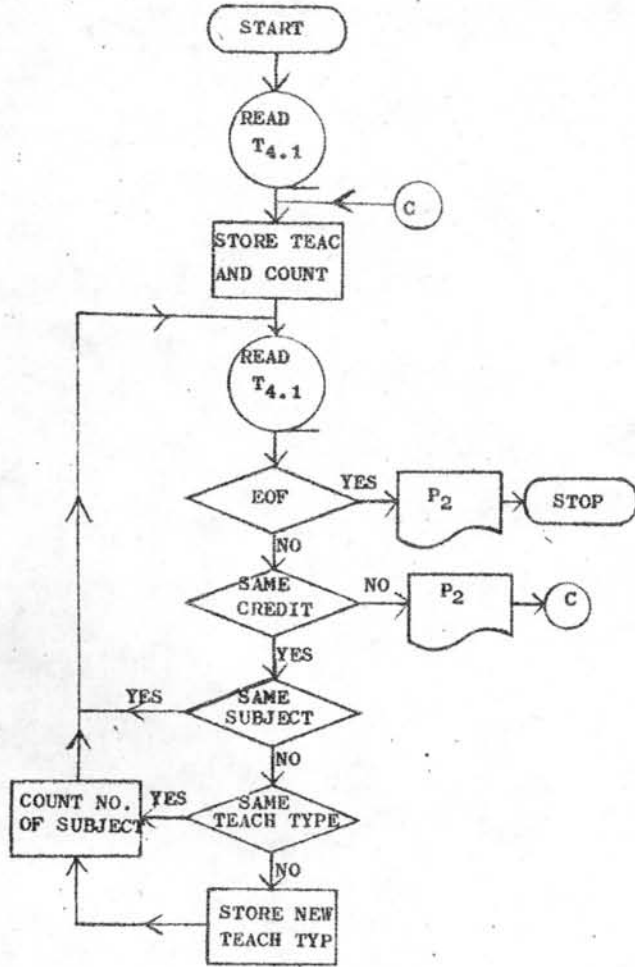
PROGRAM TRANS



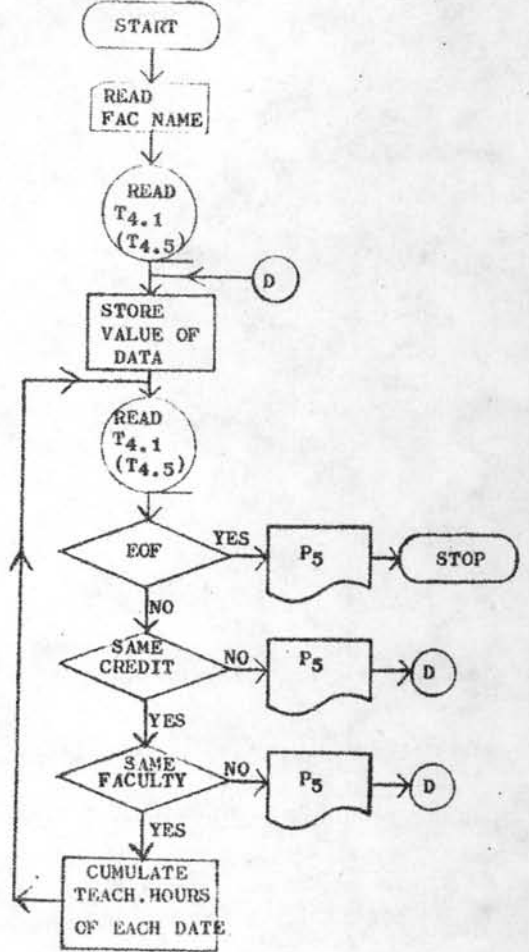
PROGRAM CRTYP



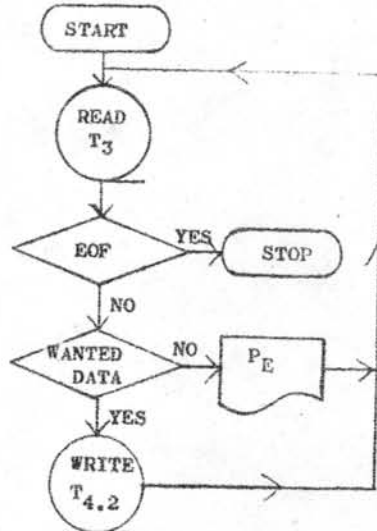
PROGRAM TEATY



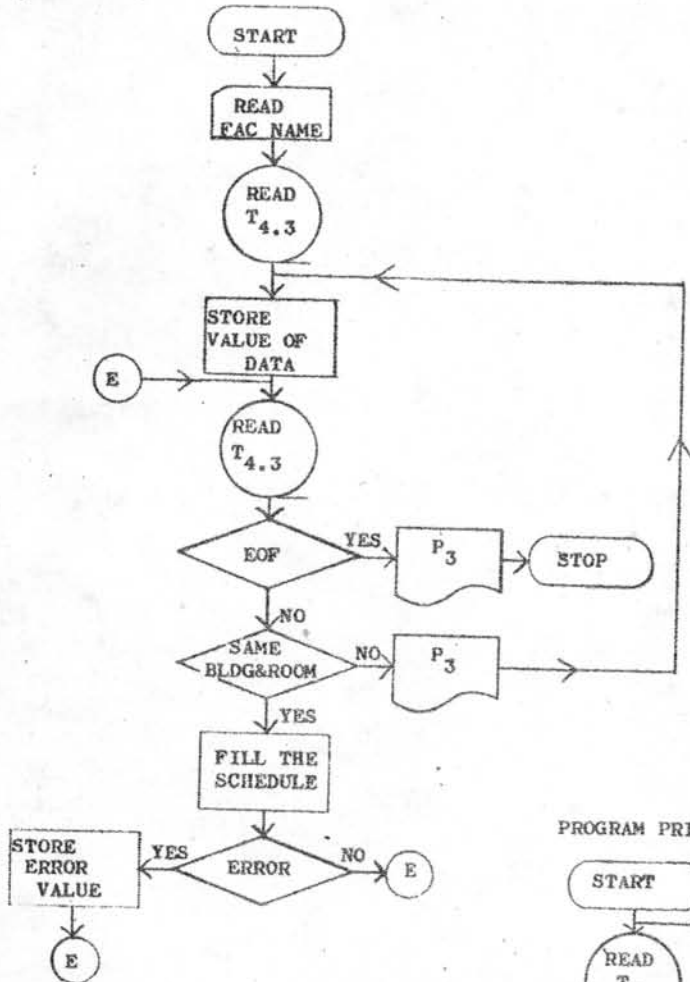
PROGRAM FREQU



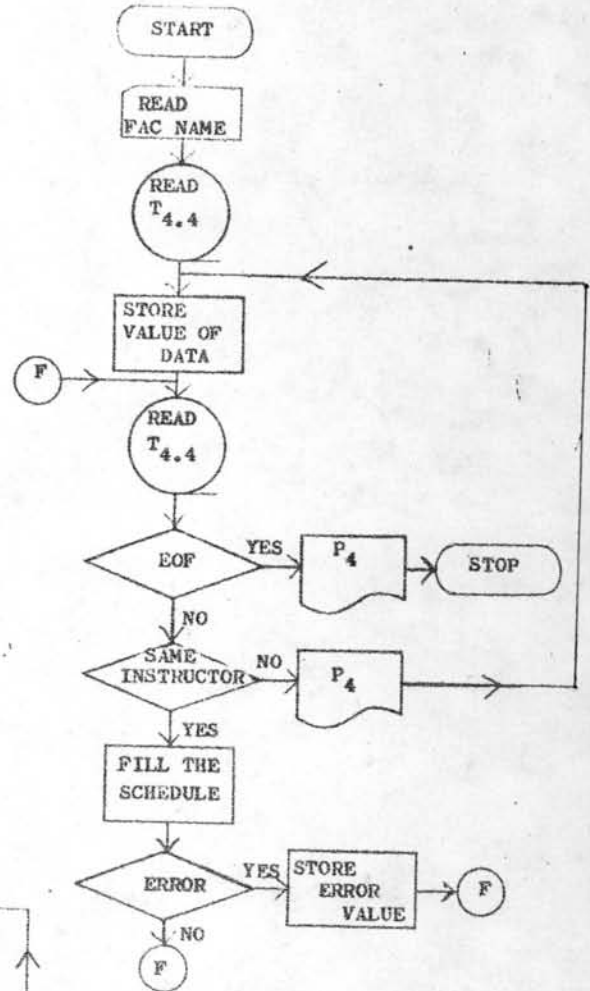
PROGRAM EJECT



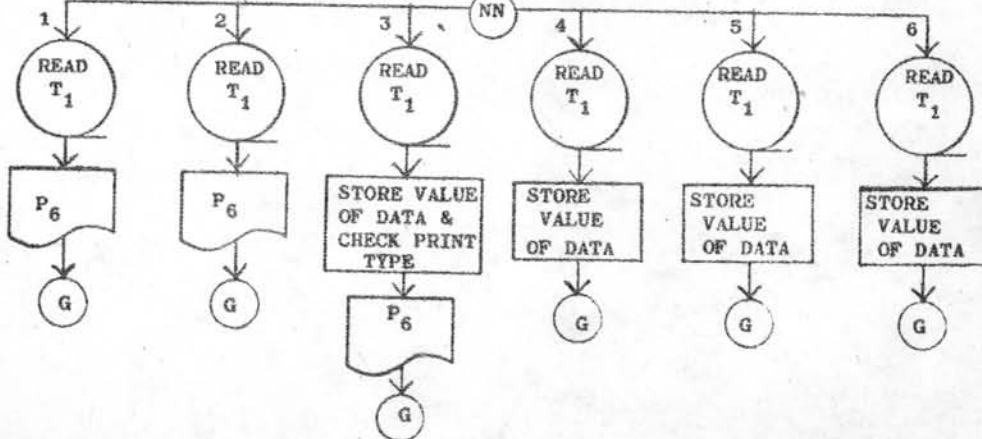
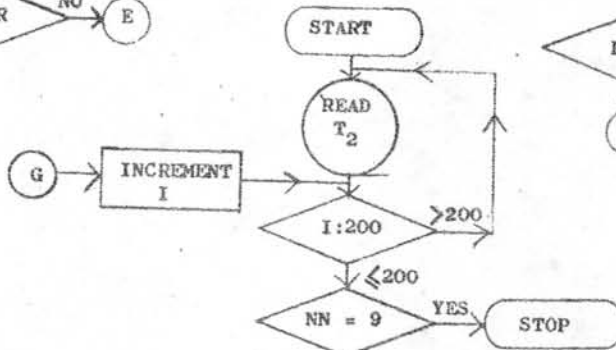
PROGRAM CLASS



PROGRAM INSTR



PROGRAM PRINT



CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF CREDIT TYPE

NUMBER OF CREDIT 1

NO.	LECTURE	CREDIT LABORATORY	TYPE PRACTICE	OTHER
1	1	0	0	0
2	0	0	1	0
3	0	1	0	0

CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 1

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
	149	199	269	299	349	399	449	499	549	599	649	699	749	799		
1	0	4	3	8	11	0	0	4	3	5	1	0	5	0	0	81
2	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	3
3	0	0	12	2	36	0	0	0	0	0	0	0	3	0	0	53
TOTAL	0	5	15	10	47	0	0	43	3	5	1	0	8	0	0	137

*B. UCHUMBUS

CHULALONGKORN UNIVERSITY
SUMMARIES REPORT OF CREDIT TYPE

NUMBER OF CREDIT 2

NO.	LECTURE	CREDIT LABORATORY	TYPE PRACTICE	OTHER
1	2	0	0	0
2	1	1	0	0
3	0	2	0	0
4	1	0	1	0

CHULALONGKORN UNIVERSITY
ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 2

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
		149	199	249	299	349	399	449	499	549	599	649	699	749	799	
1	0	34	12	10	53	41	9	119	1	28	4	3	1	0	0	315
2	0	5	5	0	5	0	0	1	3	0	1	0	1	0	0	21
3	0	0	0	0	10	0	0	0	0	2	0	0	0	0	0	12
4	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	26
TOTAL	0	39	17	10	68	41	9	146	4	30	5	3	2	0	0	374

CHULALONGKORN UNIVERSITY
SUMMARIES REPORT OF CREDIT TYPE

NUMBER OF CREDIT 3

NO.	LECTURE	CREDIT LABORATORY	TYPE PRACTICE	OTHER
1	3	0	0	0
2	2	1	0	0
3	0	3	0	0
4	1	2	0	0
5	2	0	1	0

CHULALONGKORN UNIVERSITY
ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 3

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
1	3	7	78	10	89	49	3	16	2	13	1	31	1	0	0	301
2	0	7	23	6	36	0	0	0	2	1	0	0	0	0	0	75
3	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3
4	0	0	1	0	4	0	0	0	0	0	1	0	0	0	0	6
5	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
TOTAL	3	14	101	16	129	49	3	19	6	14	2	31	1	0	0	388

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF CREDIT TYPE

NUMBER OF CREDIT 4

NO.	LECTURE	CREDIT LABORATORY	TYPE PRACTICE	OTHER
1	3	1	0	0
2	4	0	0	0
3	2	2	0	0
4	0	4	0	0
5	1	3	0	0
6	3	0	1	0



CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 4

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
	149	199	249	299	349	399	449	499	549	599	649	699	749	799		
1	0	0	11	0	7	0	0	0	0	0	0	0	0	0	0	18
2	0	0	0	1	8	2	1	0	0	0	0	0	0	0	0	12
3	0	0	0	0	3	0	0	0	0	0	2	0	1	0	0	6
4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
TOTAL	0	0	11	1	20	2	1	4	0	0	2	0	1	0	0	42

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF CREDIT TYPE

NUMBER OF CREDIT 5

NO.	LECTURE	CREDIT LABORATORY	TYPE PRACTICE	OTHER
1	2	3	4	5

CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 5

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
	149	199	249	299	349	399	449	499	549	599	649	699	749	799		
1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF TEACHING TYPE

NUMBER OF CREDIT 1

NO.	TEACHING TYPE					LECT/LAB	LECT/TUT	OTHER
	LECTURE	LABORATORY	PRACTICE	TUTORIAL	STUDIO			
1	1	0	0	1	0	0	0	0
2	1	0	0	0	0	0	0	0
3	0	0	2	0	0	0	0	0
4	0	3	0	0	0	0	0	0
5	0	0	0	0	0	0	2	0
6	0	2	0	0	0	0	0	0
7	2	0	0	0	0	0	0	0
8	0	5	0	0	0	0	0	0
9	0	4	0	0	0	0	0	0

CHULALONGKORN UNIVERSITY

CHULALONGKORN UNIVERSITY
ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 1

TYPE	093	100 149	150 199	200 249	250 299	300 349	350 399	400 449	450 499	500 549	550 599	600 649	650 699	700 749	750 799	TOTAL
1	0	2	0	0	1	0	0	8	0	0	0	0	0	0	0	11
2	0	2	3	0	9	0	0	32	3	5	1	0	3	0	0	58
3	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	3
4	0	0	11	0	36	0	0	0	0	0	0	0	0	1	0	48
5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7
6	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
7	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	5
8	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	1
9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL	0	5	14	10	47	0	0	43	3	5	1	0	8	0	0	136

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF TEACHING TYPE

NUMBER OF CREDIT 2

NO.	LECTURE	LABORATORY	TEACHING PRACTICE	TYPE TUTORIAL	STUDIO	LECT/LAB	LECT/TUT	OTHER
1	2	0	0	0	0	0	0	0
2	0	1	0	0	0	0	3	0
3	0	0	0	0	0	0	3	0
4	1	1	0	1	0	0	0	0
5	2	0	0	2	0	0	0	0
6	4	0	0	0	0	0	0	0
7	1	1	0	2	0	0	0	0
8	1	0	0	1	0	0	0	0
9	1	0	0	2	0	0	0	0
10	3	0	0	1	0	0	0	0
11	3	1	0	0	0	0	0	0
12	1	3	0	0	0	0	0	0
13	1	2	0	0	0	0	0	0
14	0	6	0	0	0	0	0	0
15	0	3	0	0	0	0	0	0
16	3	0	0	0	0	0	0	0
17	1	0	0	0	2	0	0	0
18	2	0	0	1	0	0	0	0
19	1	0	2	0	0	0	0	0
20	0	1	0	0	0	0	0	3
21	2	1	0	0	0	0	0	0

CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 2

TYPE	093	100 149	150 199	200 249	250 299	300 349	350 399	400 449	450 499	500 549	550 599	600 649	650 699	700 749	750 799	TOTAL
1	0	23	10	10	53	36	7	114	1	26	4	3	1	0	0	288
2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6
4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
6	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	4
8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12	0	0	4	0	5	0	0	0	1	0	1	0	1	0	0	12
13	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	4
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	4
16	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
17	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
19	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25
20	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL	0	39	15	10	68	41	8	146	4	30	5	3	2	0	0	371

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF TEACHING TYPE

NUMBER OF CREDIT 3

NO.	TEACHING TYPE					LECT/LAB	LECT/TUT	OTHER
	LECTURE	LABORATORY	PRACTICE	TUTORIAL	STUDIO			
1	3	0	0	0	0	0	0	0
2	2	1	0	2	0	0	0	0
3	1	0	0	3	0	0	0	0
4	1	0	0	2	0	0	0	0
5	2	0	0	2	0	0	0	0
6	5	0	0	0	0	0	0	0
7	4	0	0	0	0	0	0	0
8	2	3	0	0	0	0	0	0
9	0	6	0	0	0	0	0	0
10	3	0	0	1	0	0	0	0
11	1	6	0	0	0	0	0	0
12	3	1	0	0	0	0	0	0
13	2	2	0	0	0	0	0	0
14	2	2	0	1	0	0	0	0
15	2	1	0	0	0	0	0	0
16	2	0	0	0	0	0	0	0
17	2	0	0	0	2	0	0	0
18	0	0	0	0	0	0	0	4
19	2	0	2	0	0	0	0	0
20	0	8	0	0	0	0	0	0
21	1	3	0	0	0	0	0	0
22	1	4	0	0	0	0	0	0



CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 3

TYPE	093	100 149	150 199	200 249	250 299	300 349	350 399	400 449	450 499	500 549	550 599	600 649	650 699	700 749	750 799	TOTAL
1	3	2	72	10	86	47	2	15	2	9	1	31	1	0	0	281
2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3
6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	0	1	0	0	4	0	0	0	0	1	0	0	0	0	0	6
8	0	0	21	0	34	0	0	0	2	0	0	0	0	0	0	57
9	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
10	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	3
11	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	5
12	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
13	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
14	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	6
15	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
16	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
20	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
22	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL	3	14	98	16	130	49	3	19	6	14	2	31	1	0	0	386

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF TEACHING TYPE

NUMBER OF CREDIT 4

NO.	LECTURE	LABORATORY	TEACHING PRACTICE	TYPE TUTORIAL	STUDIO	LECT/LAB	LECT/TUT	OTHER
1	3	3	0	0	0	0	0	0
2	2	3	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0
4	2	6	0	0	0	0	0	0
5	0	9	0	0	0	0	0	0
6	1	9	0	0	0	0	0	0
7	0	0	0	0	8	0	0	0
8	2	4	0	0	0	0	0	0
9	2	5	0	0	0	0	0	0

CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 4

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
1	0	0	10	0	7	0	0	4	0	0	0	0	0	0	0	21
2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3	0	0	0	1	8	2	0	0	0	0	0	0	0	0	0	11
4	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	4
5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL	0	0	11	1	20	2	1	4	0	0	2	0	1	0	0	42

CHULALONGKORN UNIVERSITY

SUMMARIES REPORT OF TEACHING TYPE

NUMBER OF CREDIT 5

NO.	LECTURE	LABORATORY	TEACHING PRACTICE	TYPE TUTORIAL	STUDIO	LECT/LAB	LECT/TUT	OTHER
1	2	9	0	0	0	0	0	0

CHULALONGKORN UNIVERSITY

ANALYSIS THE FREQUENCY OF COURSE FOR CREDIT NO. 5

TYPE	093	100	150	200	250	300	350	400	450	500	550	600	650	700	750	TOTAL
	149	199	249	299	349	399	449	499	549	599	649	699	749	799		
1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1

FREQUENCY USED OF EACH CREDIT

CHULALONGKORN UNIVERSITY

FACULTY OF ARTS

3 CREDIT

TIME

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	2	15	8	17	0	15	2	6	1	1	0	0	67
TU	8	13	8	11	0	7	5	1	0	0	0	0	53
WE	13	4	13	2	0	0	0	0	0	0	0	0	32
TH	8	7	18	17	0	10	1	0	1	0	0	0	62
FR	13	7	18	10	1	15	15	16	2	0	0	0	97
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	44	46	65	57	1	47	23	23	4	1	0	0	311

FACULTY OF ENGINEERING

3 CREDIT

TIME

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	9	24	28	24	0	23	18	15	11	2	0	0	154
TU	11	20	16	15	1	14	13	12	4	0	0	0	106
WE	12	24	26	22	0	5	5	5	2	1	0	0	102
TH	11	24	19	15	1	19	14	10	6	1	0	0	120
FR	7	22	28	22	0	26	17	14	8	0	0	0	142
SA	0	6	6	6	0	2	2	3	1	0	0	0	26
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	50	120	123	104	2	89	69	59	30	4	0	0	850

FORMATION V.

FREQUENCY USED OF EACH CREDIT

CHULALONGKORN UNIVERSITY

FACULTY OF COMMERCE AND ACCOUNTANCY

3 CREDIT		T I M E														
DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL			
MO	2	10	9	7	0	2	1	2	0	1	1	0	35			
TU	0	4	4	2	0	11	10	1	2	0	0	0	34			
WE	2	10	8	8	0	0	4	1	0	1	1	1	36			
TH	0	6	5	5	0	1	7	5	2	0	1	1	33			
FR	2	9	7	6	0	4	3	2	0	1	0	0	34			
SA	0	1	0	0	0	0	0	0	0	0	0	0	1			
SU	0	0	0	0	0	0	0	0	0	0	0	0	0			
TOTAL	6	40	33	28	0	18	25	11	4	3	3	2	173			

FACULTY OF SCIENCE

3 CREDIT		T I M E														
DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL			
MO	21	35	28	26	0	27	13	11	2	1	0	0	164			
TU	16	20	14	10	0	26	12	12	3	0	0	0	113			
WE	17	34	27	26	0	5	5	4	2	1	0	0	121			
TH	17	20	13	13	0	24	12	11	1	0	0	0	111			
FR	22	32	26	25	0	26	12	9	2	1	0	0	155			
SA	0	2	3	3	0	0	0	0	0	0	0	0	8			
SU	0	0	0	0	0	0	0	0	0	0	0	0	0			
TOTAL	93	143	111	103	0	108	54	47	10	3	0	0	672			

FREQUENCY USED OF EACH CREDIT

CHULALONGKORN UNIVERSITY

FACULTY OF POLITICAL SCIENCE

3 CREDIT

T I M E

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	3	6	8	7	0	5	7	9	5	0	0	0	50
TU	4	4	2	3	0	4	4	5	3	0	0	0	29
WE	5	5	6	6	0	0	0	0	0	0	0	0	22
TH	4	5	4	3	0	4	5	6	2	0	0	0	33
FR	3	5	7	9	0	4	5	1	0	0	0	0	34
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	19	25	27	28	0	17	21	21	10	0	0	0	168

FACULTY OF EDUCATION

3 CREDIT

T I M E

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	6	6	4	7	0	3	2	5	1	0	0	0	34
TU	6	3	4	5	0	4	2	3	1	0	0	0	28
WE	6	6	6	6	0	3	3	3	1	0	0	0	34
TH	8	7	5	6	0	5	3	2	0	0	0	0	36
FR	3	2	5	9	0	5	2	2	0	0	0	0	28
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	29	24	24	33	0	20	12	15	3	0	0	0	160

ANALYSIS OF CLASSROOM UTILIZATION

CHULALONGKORN UNIVERSITY

FACULTY OF ECONOMICS

BUILDING ECON

ROOM NO. 504

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	615225 1	611102 2	611101 1	0 0 0	0 0 0	0 0 0	0 0 0	611215 1	0 0 0	0 0 0	0 0 0	0 0 0	4
TU	614217 1	0 0 0	0 0 0	610102 1	0 0 0	614227 1	614227 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	4
WE	615225 1	611102 2	611101 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	3
TH	614217 1	614217 1	0 0 0	610102 1	0 0 0	0 0 0	614227 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	4
FR	615225 1	611102 2	611101 1	0 0 0	0 0 0	0 0 0	0 0 0	611215 1	611215 1	0 0 0	0 0 0	0 0 0	5
SA	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
SU	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0

* 2 UCHMALS

ANALYSIS OF CLASSROOM UTILIZATION

CHULALONGKORN UNIVERSITY

FACULTY OF POLITICAL SCIENCE

BUILDING POL ROOM NO.

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	313311 1	314353 1	314411 1	314411 1	0 0	314459 1	314459 .1	314313 1	312411 1	0 0	0 0	0 0	8
TU	312465 1	312465 1	314311 1	314456 1	0 0	314315 1	314312 1	314459 1	314453 1	0 0	0 0	0 0	8
WE	314316 1	314415 1	314456 1	314456 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	4
TH	314111 1	313113 1	314452 1	314452 1	0 0	314413 1	314412 1	314411 1	312381 1	0 0	0 0	0 0	8
FR	314413 1	314413 1	314462 1	314462 1	0 0	313421 1	314415 1	314415 1	0 0	0 0	0 0	0 0	7
SA	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
SU	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0

TEACHER UTILIZATION FOR CHULALONGKORN UNIVERSITY

FACULTY OF SCIENCE

INSTRUCTOR NAME LIKIT

T I M E S

DAYS	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	269 311 1 GENSC 8301	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	1
TU	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0
WE	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	269 312 1 GENSC 8302	269 312 1 GENSC 8302	269 312 1 GENSC 8302	0 01	0 01	0 01	0 01	3
TH	269 311 1 GENSC 8301	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	1
FR	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	269 312 2 GENSC 8302	269 312 2 GENSC 8302	269 312 2 GENSC 8302	0 01	0 01	0 01	0 01	3
SA	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0
SU	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0 01 0 01	0

0176111111 01

TEACHER UTILIZATION FOR CHULALONGKORN UNIVERSITY

FACULTY OF EDUCATION

INSTRUCTOR NAME CHAI-UA

T I M E S

DAYS	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	0	411 283 1 EDU3 371	411 283 2 EDU3 371	0	0	0	0	0	0	0	0	0	2
TU	0	411 283 1 EDU3 383	411 283 2 EDU3 383	0	0	0	411 283 3 EDU3 383	0	0	0	0	0	3
WE	0	0	0	411 283 4 EDU 5202	0	0	0	0	0	0	0	0	1
TH	0	0	411 283 3 EDU3 383	0	0	411 283 1 EDU3 383	0	0	0	0	0	0	2
FR	0	0	0	0	0	411 283 2 EDU3 383	0	411 283 4 EDU3 383	0	0	0	0	2
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0

ANALYSIS OF CLASSROOM UTILIZATION

CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

BUILDING ENG3

ROOM NO. 3225

DAY	09-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	0 0	163212 1	151403 2	163212 5	0 0	167403 1	167403 1	167403 1	167403 1	0 0	0 0	0 0	7
TU	0 0	0 0	0 0	0 0	0 0	171205 11	171205 11	171205 11	0 0	0 0	0 0	0 0	3
WE	0 0	163212 1	151403 2	163212 5	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	3
TH	0 0	0 0	0 0	0 0	0 0	167403 1	167403 1	167403 1	167403 1	0 0	0 0	0 0	4
FR	0 0	163212 1	0 0	163212 5	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	2
SA	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0
SU	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0

6 - 8 UENHALL

ANALYSIS OF CLASSROOM UTILIZATION
 CHULALONGKORN UNIVERSITY

FACULTY OF SCIENCE

BUILDING GEO

ROOM NO. 7307

DAY	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	0	257212 1	0	0	0	0	0	0	0	0	0	0	1
TU	0	257232 1	257203 1	267442 1	0	0	0	0	0	0	0	0	3
WE	0	257212 1	257573 1	257332 1	0	0	0	0	0	0	0	0	3
TH	0	257232 1	257203 1	0	0	0	0	0	0	0	0	0	2
FR	0	0	257573 1	257575 1	0	0	0	0	0	0	0	0	2
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0

ERROR INFORMATION IS *** 403 267 442 *** 102 267 573 *** 302 267 575 ***

TEACHER UTILIZATION FOR CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

INSTRUCTOR NAME SPS

T I M E S

DAYS	0-9	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO						165 203 ENG3 3222	165 456 ENG3 3107	165 456 ENG3 3107	165 456 ENG3 3107				4
TU													0
WE													0
TH		162 410 ENG3 3307	162 410 ENG3 3307	162 410 ENG3 3307									3
FR						165 203 ENG3 3222							1
SA													0
SU													0

0 - 2 22222222

TEACHER UTILIZATION FOR CHULALONGKORN UNIVERSITY-

FACULTY OF SCIENCE

INSTRUCTOR NAME SAKDA

T I M E S

DAYS	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO			269 435 1 GENSC 8301	261 224 1 MATH 29	0	0	0	0	0	0	0	0	2
TU				261 421 1 MATH 20/3	0	0	0	0	0	0	0	0	1
WE				261 224 1 MATH 29	0	0	0	0	0	0	0	0	1
TH					261 421 1 MATH 20/3	0	0	0	0	0	0	0	1
FR			269 223 1 GENSC 8301	261 224 1 MATH 29	0	0	0	0	0	0	0	0	2
SA													0
SU													0

*** ERROR INFORMATION IS *** 104 261 421 *** 504 269 223 *** 104 269 435 ***

TEACHER UTILIZATION FOR CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

INSTRUCTOR NAME SWW

T I M E S

DAYS	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	162 280 3 ENG2 2303	162 352 2 ENG3 3219	0	0	0	0	0	0	0	0	0	0	2
TU	0	0	0	0	0	0	0	0	0	0	0	0	0
WE	162 280 3 ENG2 2303	162 352 2 ENG3 3219	0	0	0	0	0	0	0	0	0	0	2
TH	0	0	0	0	0	0	0	0	0	0	0	0	0
FR	162 280 3 ENG2 2303	162 352 2 ENG3 3219	0	0	0	0	0	0	0	0	0	0	2
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0

FREQUENCY USED OF EACH CREDIT

CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

1 CREDIT		TIME												
DAY	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL	
MO		0	0	0	0	4	6	6	3	1	1	0	21	
TU	1	5	5	4	0	7	7	7	1	1	1	0	39	
WE		0	0	0	0	9	9	9	0	0	0	0	27	
TH	1	7	8	7	1	7	11	11	6	0	0	0	59	
FR		0	0	0	0	5	7	7	3	1	1	0	24	
SA	2	3	3	3	2	3	3	3	2	0	0	0	24	
SU		0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	4	15	16	14	3	35	43	43	15	3	3	0	194	

FACULTY OF SCIENCE

1 CREDIT		TIME												
DAY	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL	
MO		0	1	0	0	19	19	19	0	0	0	0	58	
TU	3	9	7	7	0	14	14	14	0	0	0	0	68	
WE		5	4	4	0	5	5	5	0	0	0	0	28	
TH	1	4	5	5	0	15	15	16	1	0	0	0	62	
FR		5	4	5	0	19	19	18	0	0	0	0	70	
SA		1	1	1	0	0	0	0	0	0	0	0	3	
SU		0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	4	24	22	22	0	72	72	72	1	0	0	0	289	

FREQUENCY USED OF EACH CREDIT
 CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

2 CREDIT

DAY	TIME										TOTAL		
	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18		18-19	19-20
MO	0	1	3	0	7	7	7	4	0	0	0	0	29
TU	5	3	6	0	15	18	18	6	0	0	0	0	71
WE	0	1	1	0	1	2	2	1	1	0	0	0	9
TH	3	4	6	0	9	9	9	4	1	1	1	1	47
FR	1	2	4	0	5	5	5	3	0	0	0	0	25
SA	0	0	0	0	2	2	2	0	0	0	0	0	6
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	9	11	20	0	39	43	43	18	2	1	1	1	187

FACULTY OF SCIENCE

2 CREDIT

DAY	TIME										TOTAL		
	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18		18-19	19-20
MO	3	6	4	3	0	1	2	2	0	0	0	0	21
TU	2	7	9	7	0	6	5	2	1	1	0	0	40
WE	2	6	3	3	0	3	2	1	0	0	0	0	20
TH	3	8	8	6	0	9	9	8	0	0	0	0	51
FR	1	5	3	3	0	7	8	8	1	0	0	0	36
SA	0	0	0	0	0	1	1	0	0	0	0	0	2
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11	32	27	22	0	27	27	21	2	1	0	0	170

FREQUENCY USED OF EACH CREDIT

CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

3 CREDIT		TIME													
DAY	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL		
MO	12	22	28	29	0	9	14	15	8	0	0	0	137		
TU	4	13	9	7	0	13	17	13	7	0	0	0	83		
WE	11	21	28	27	0	12	12	12	2	0	0	0	125		
TH	3	12	16	12	0	12	14	14	7	0	0	0	90		
FR	12	22	22	22	0	10	14	14	7	0	0	0	123		
SA	1	3	3	3	0	3	3	3	0	0	0	0	19		
SU	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	43	93	106	100	0	59	74	71	31	0	0	0	577		

FACULTY OF SCIENCE

3 CREDIT		TIME													
DAY	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL		
MO	27	38	28	30	2	28	16	13	1	0	0	0	183		
TU	12	18	17	14	1	6	6	6	1	0	0	0	81		
WE	28	34	24	22	2	6	7	5	0	0	0	0	128		
TH	12	18	17	9	0	26	14	14	3	1	0	0	114		
FR	26	30	25	20	0	21	7	6	1	0	0	0	136		
SA	1	2	3	3	0	1	1	1	0	0	0	0	12		
SU	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	116	140	114	98	5	38	51	45	6	1	0	0	654		

FREQUENCY USED OF EACH CREDIT
 CHULALONGKORN UNIVERSITY

FACULTY OF ENGINEERING

4 CREDIT

DAY	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	1	6	0	0	0	3	3	3	1	0	0	0	17
TU	1	2	2	2	0	2	2	2	0	0	0	0	13
WE	1	6	0	0	0	2	2	2	0	0	0	0	13
TH	2	1	1	1	0	4	4	4	1	0	0	0	18
FR		6	1	0	0	1	2	2	1	0	0	0	13
SA		0	0	0	0	0	0	0	0	0	0	0	0
SU		0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	21	4	3	0	12	13	13	3	0	0	0	74

FACULTY OF SCIENCE

4 CREDIT

DAY	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	TOTAL
MO	6	2	8	4	0	4	7	3	0	0	0	0	34
TU	5	2	3	6	0	5	4	4	0	0	0	0	29
WE	6	0	8	4	0	2	2	2	0	0	0	0	24
TH	8	2	8	6	0	3	5	2	0	0	0	0	34
FR	6	2	6	2	0	4	6	2	0	0	0	0	28
SA	0	0	0	0	0	0	0	0	0	0	0	0	0
SU	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	31	8	33	22	0	18	24	13	0	0	0	0	149

NO	COURSE	NO	SECT	DAYS	CLASS TIME	SCHEDULES	BLDG	ROOM	INSTRUCTOR	REMARKS	EXAM DATE	CHECK
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FACULTY OF ENGINEERING

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DEPT: CIVIL ENGINEERING

1	161-2	1	STRENGTH OF MAT I	3 CREDIT HOURS = LECT 3 CR (LECT 3 HR)							2A	
			PRE: 163-211									
		1	LECT	MO WE FR	1100-1200	ENG3	3203	STAFF	CE,SA,SV			
		2	LECT	MO WE FR	1100-1200	ENG3	3205	STAFF	CE,SA,SV			
		3	LECT	MO WE FR	1100-1200	ENG3	3206	STAFF	CE,SA,SV			
		4	LECT	MO WE FR	1100-1200	ENG3	3207	STAFF	CE,SA,SV			
2	161-301	STRENGTH OF MAT II	2 CREDIT HOURS = LECT 2 CR (LECT 2 HR)								27M	
			PRE: 161-201									
		1	LECT	TU TH	1100-1200	ENG3	3203	STAFF	CE,SA,SV			
		2	LECT	TU TH	1100-1200	ENG3	3205	STAFF	CE,SA,SV			
		3	LECT	TU TH	1100-1200	ENG3	3206	STAFF	CE,SA,SV			
		4	LECT	TU TH	1100-1200	ENG3	3207	STAFF	CE,SA,SV			
3	161-302	MAT TESTING LAB	1 CREDIT HOUR = LAB 1 CR (LAB 3 HR)								TEI	
			PRE: 161-201									
		1	LAB	TJ	1300-1600	CELAB	AR	STAFF	CHEM TECH			
		2	LAB	TH	1300-1600	CELAB	AR	STAFF	CHEM TECH			
		3	LAB	TH	0900-1200	CELAB	AR	STAFF	MT			
4	161-303	THEO OF STRUCTURES	3 CREDIT HOURS = LECT 2 CR + LAB 1 CR (LECT 2 HR + LAB 3 HR)								1M	
			PRE: 161-301									
		1	LECT	MO WE	1100-1200	ENG3	3106	STAFF	CE,SV			

NO	COURSE NO	SECT	CLASS SCHEDULES					REMARKS	EXAM DATE	CHECK
			DAYS	TIME	BLDG	ROOM	INSTRUCTOR			
		2	LECT	MO WE	1100-1200	ENG3	3107	STAFF	CE	
		3	LECT	MO WE	1100-1200	ENG3	3108	STAFF	CE	
		4	LECT	MO WE	1100-1200	ENG3	3201	STAFF	CE	
		5	LECT	MO WE	1100-1200	ENG3	3301	STAFF	SA	
		1	LAB	FR	1300-1500	ENG1	1304	STAFF	CE,SV	
		2	LAB	MO	1300-1600	ENG1	1304	STAFF	CE	
		3	LAB	TH	1300-1600	ENG1	1304	STAFF	CE	
		4	LAB	WE	1300-1600	ENG1	1304	STAFF	CE	
		5	LAB	TU	1300-1600	ENG1	1304	STAFF	SA	
5	161-320	SOIL MECHANICS 4 CREDIT HOURS = LECT 3 CR + LAB 1 CR (LECT 3 HR + LAB 3 HR)								2M
		PRER 161-301, 165-296								
		1	LECT	MO WE FR	0900-1000	ENG3	3106	STAFF	CE,SA,SV	
		2	LECT	MO WE FR	0900-1000	ENG3	3107	STAFF	CE,SA,SV	
		3	LECT	MO WE FR	0900-1000	ENG3	3108	STAFF	CE,SA,SV	
		4	LECT	MO WE FR	0900-1000	ENG3	3112	STAFF	CE,SA,SV	
		1	LAB	MO	1300-1600	CELAB	AR	STAFF	CE,SV	
		2	LAB	TU	1300-1600	CELAB	AR	STAFF	CE	
		3	LAB	WE	1300-1600	CELAB	AR	STAFF	CE	
		4	LAB	TH	1300-1600	CELAB	AR	STAFF	CE	
		5	LAB	FR	1300-1600	CELAB	AR	STAFF	SA	
6	161-330	HIGHWAY ENG 3 CREDIT HOURS = LECT 3 CR (LECT 3 HR)								5M
		PRER 161-320 OR CONSENT OF INSTRUCTOR								
		1	LECT	MO WE FR	0800-0900	ENG1	1302	STAFF	CE,SV	

CLASS SCHEDULES

NO COURSE-NO SECT DAYS TIME BLDG ROOM INSTRUCTOR REMARKS EXAM DATE CHECK

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FACULTY OF SCIENCE

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DEPT: MATHEMATICS

1	261-1 1	CALCULUS I	4 CREDIT HOURS = LECT 4 OR (LECT 4 HR)								28M
	1	LECT	MO WE FR	0800-0900	PHYS2	6319	STAFF	PURE SCIENCE, MED			
		LECT	TH	1400-1500	PHYS2	6319	STAFF				
	2	LECT	MO TU WE TH	1100-1200	EDU	267	STAFF	EDUCATION, STATISTICS			
2	261-102	CALCULUS II	4 CREDIT HOURS = LECT 4 OR (LECT 4 HR)								28M
		PRE: 261-100 OR 261-101									
	1	LECT	MO WE TH FR	0800-0900	MATH	22	STAFF	PURE SCIENCE			
	2	LECT	MO WE TH FR	0800-0900	MATH	28	STAFF	PURE SCIENCE			
	3	LECT	MO WE TH FR	0800-0900	PHYS1	6312	STAFF	PURE SCIENCE			
	4	LECT	MO WE TH FR	0800-0900	CHEM1	6312	STAFF	PURE SCIENCE			
	5	LECT	MO WE FR	0800-0900	CHEM1	6309	STAFF	PURE SCIENCE			
		LECT	TH	0800-0900	CHEM1	6308	STAFF				
	6	LECT	MO WE TH FR	1000-1100	PHYS1	361	STAFF	PURE SCIENCE			
	7	LECT	MO WE TH FR	1000-1100	CHEM2	216	STAFF	PURE SCIENCE			
	8	LECT	MO WE TH FR	1000-1100	CHEM1	453	STAFF	PURE SCIENCE			
	9	LECT	MO WE TH FR	1000-1100	MATH	11	STAFF	PURE SCIENCE			
	10	LECT	MO WE FR	1000-1100	CHEM3	9309	STAFF	PURE SCIENCE			
		LECT	TH	1000-1100	CHEM3	9310	STAFF				
	11	LECT	MO FR	1400-1500	MATH	24	STAFF	PHARM			
		LECT	TU TH	0800-0900	MATH	24	STAFF				



ภาคผนวก ข

บันทึกข้อความ

ส่วนราชการ แผนกวิชาวิศวะกรรมคอมพิวเตอร

ที่ ๑๗. ๐๖๔/๒๕๒๐ วันที่ ๒๐ กันยายน ๒๕๒๐

เรื่อง ขอสัมภาษณ์เกี่ยวกับการจัดตารางสอนตารางสอบ

เรียน กรรมการประสานงานตารางสอนตารางสอบ

ด้วยนายอร่าม ตันติโสภณวิเศษ นิสิตบัณฑิตวิทยาลัย แผนกวิชาวิศวะกรรม
คอมพิวเตอร กำลังทำการวิจัยเกี่ยวกับการจัดตารางสอนตารางสอบของจุฬาลงกรณ
มหาวิทยาลัย เพื่อเสนอเป็นวิทยานิพนธ์ ในหัวข้อเรื่อง การออกแบบระบบการจัดตาราง
สอนตารางสอบด้วยคอมพิวเตอร มีความจำเป็นต้องอาศัยความช่วยเหลือเกี่ยวกับ
ข้อมูลและสารสนเทศในด้านนี้จากท่านด้วยการสัมภาษณ์ จึงต้องขอรบกวนเวลาของท่าน
ในเรื่องนี้ด้วย

จึงเรียนมาเพื่อโปรดกรุณาให้ความอนุเคราะห์ด้วย

(ผศ. ดร. สวัสดิ์ แสงบางปลา)

หัวหน้าแผนกวิชาฯ

ประวัติการศึกษา

นายอร่าม ดันดีโสภณวิช เกิดวันที่ ๒ มิถุนายน ๒๕๔๒ สำเร็จการศึกษา
วิทยาศาสตรบัณฑิต (ศึกษาศาสตร์) จากมหาวิทยาลัยสงขลานครินทร์ เมื่อปี พ.ศ. ๒๕๑๖
เข้าศึกษาในแผนกวิชาวิศวกรรมคอมพิวเตอร์ บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย
เมื่อปี พ.ศ. ๒๕๑๘

