

CHAPTER IV

PROGRAM DEVELOPMENT



4.1 Tools and equipments

Hardware:

Intel® Pentium® 4 CPU 2.40GHz, AT/AT Compatible, 256 MB RAM, Harddisk 40GB.

Software:

1. Microsoft Windows 2000 5.00.2195 Service Pack 4
2. Microsoft Visual Studio .Net 2003
3. Microsoft SQL server 2000 Enterprise Edition
4. Microsoft .NET Framework SDK v1.1

4.2 System structure

According to system features determined in chapter3, the operation chart of the system can be presented in figure 4.1. The system structure is separated into five main sections, which are WOS database, product classification and coding, code installation, data installation, and system management.

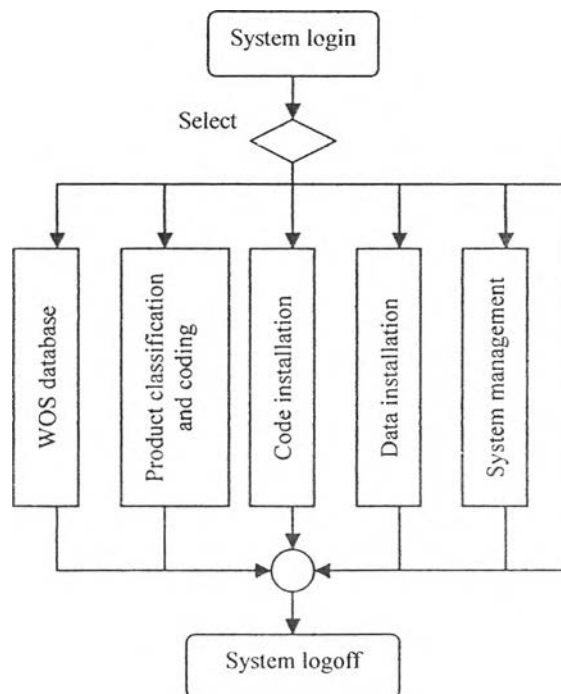


Figure 4.1 Operation chart of the program

4.3 Database system structure

In this section, user can search, add, edit, or delete any WOS. All data recorded in WOS documents will be kept in this section. The operation chart of WOS database is shown in figure 4.2.

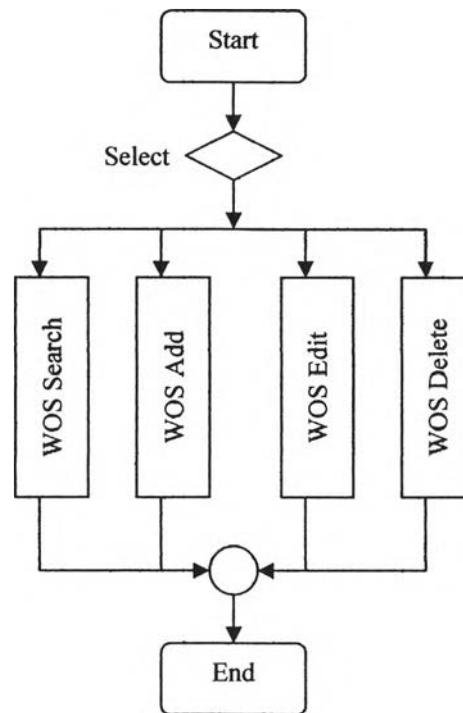


Figure 4.2: Operation chart of WOS database

Commonly, there are four activities that user usually perform in WOS database section: Search, add, edit, and delete. The operation charts of these activities are presented in figure 4.3, 4.4, and 4.5.

4.3.1 WOS Add

Adding new data is the first activity that has to be done. Significant data in WOS document will be recorded in the WOS database by this operation. The operation chart of WOS Add can be illustrated in figure 4.3

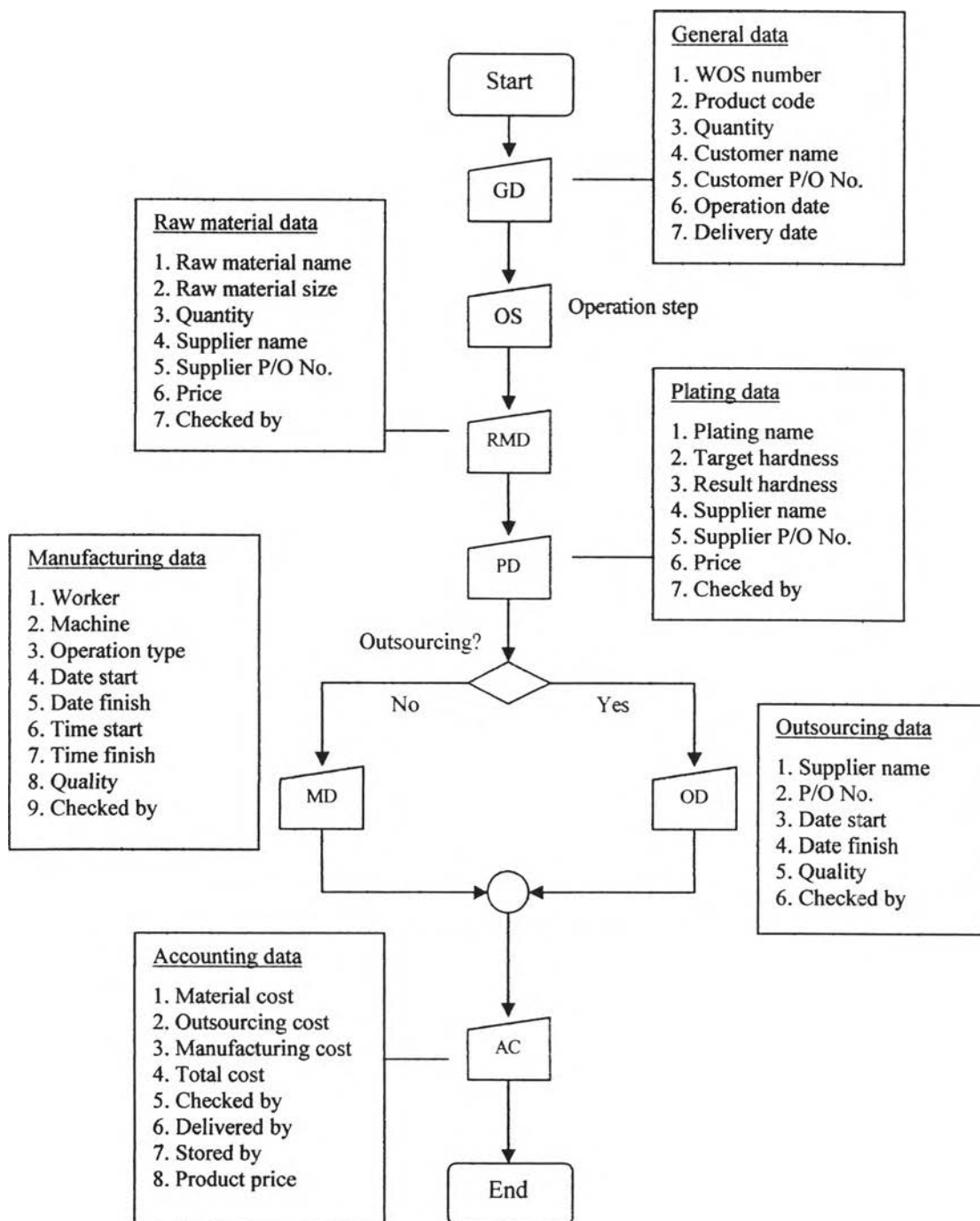


Figure 4.3: Operation chart of WOS Add section

4.3.2 WOS Search

Once WOS were recorded in the database system, user can search the target WOS by this operation. The operation chart of WOS Add can be illustrated in figure 4.4.

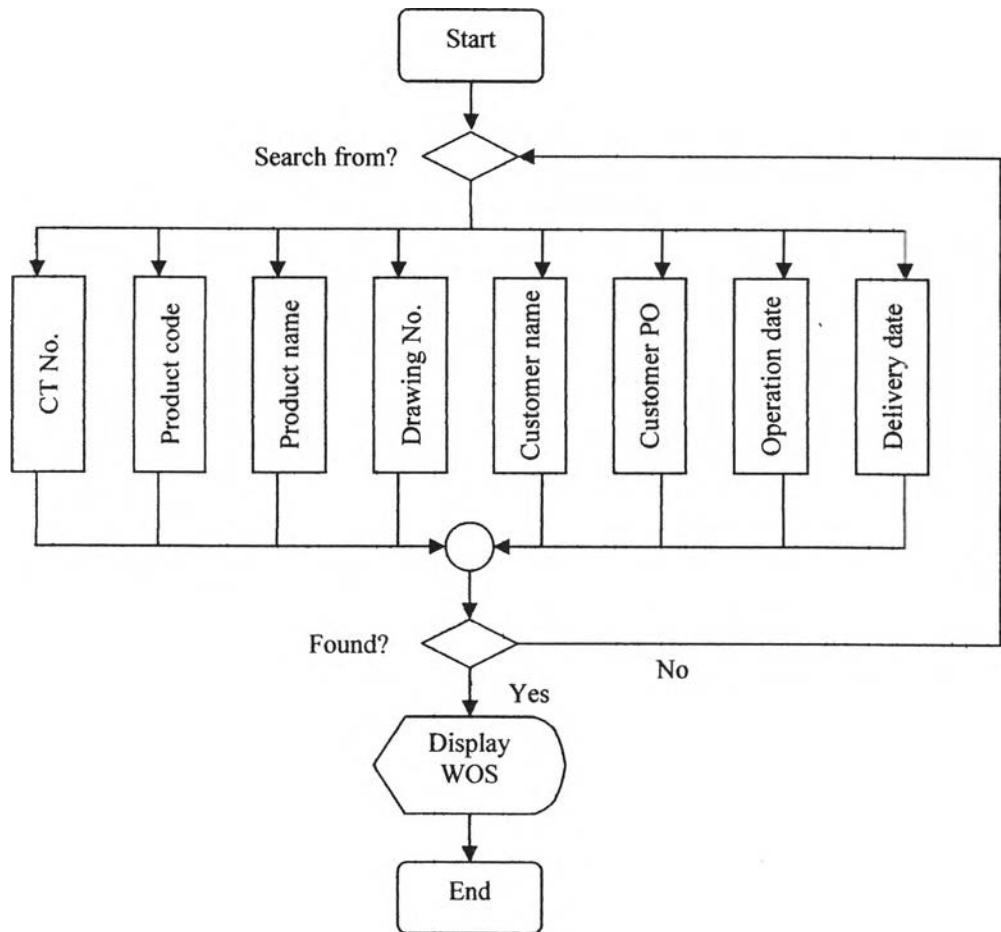


Figure 4.4: Operation chart of WOS Search section

4.3.3 WOS Edit

User can edit the target WOS by WOS Edit. The operation chart of WOS Edit can be illustrated in figure 4.5.

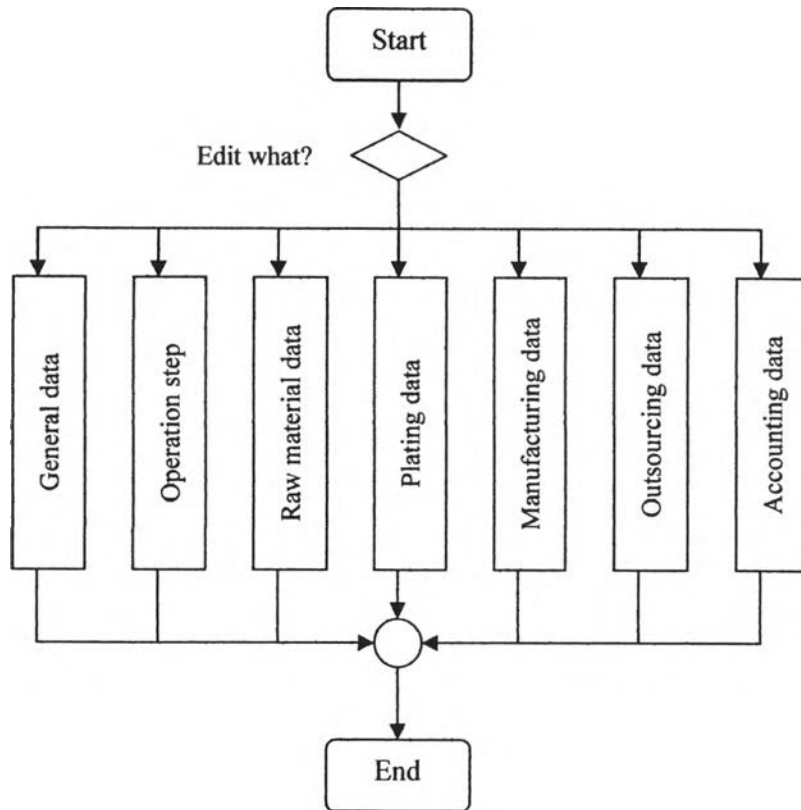


Figure 4.5: Operation chart of WOS Edit section

4.4 Classification and Coding System structure

In this section, user can generate code, search, edit, or delete a product data. The operation chart of Product classification and coding is shown in figure 4.6.

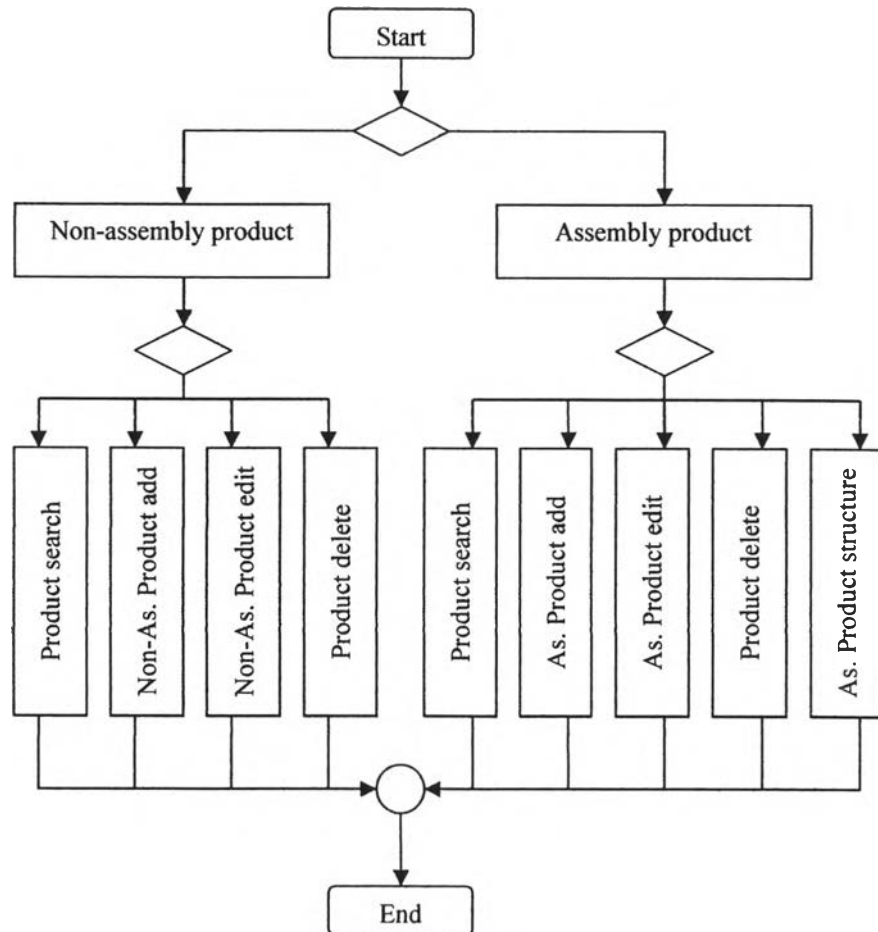


Figure 4.6: Operation chart of product classification and coding section

4.4.1 Product search

Once products were coded and recorded in the database system, user can search the target product in this section. The operation chart of product search can be illustrated in figure 4.7.

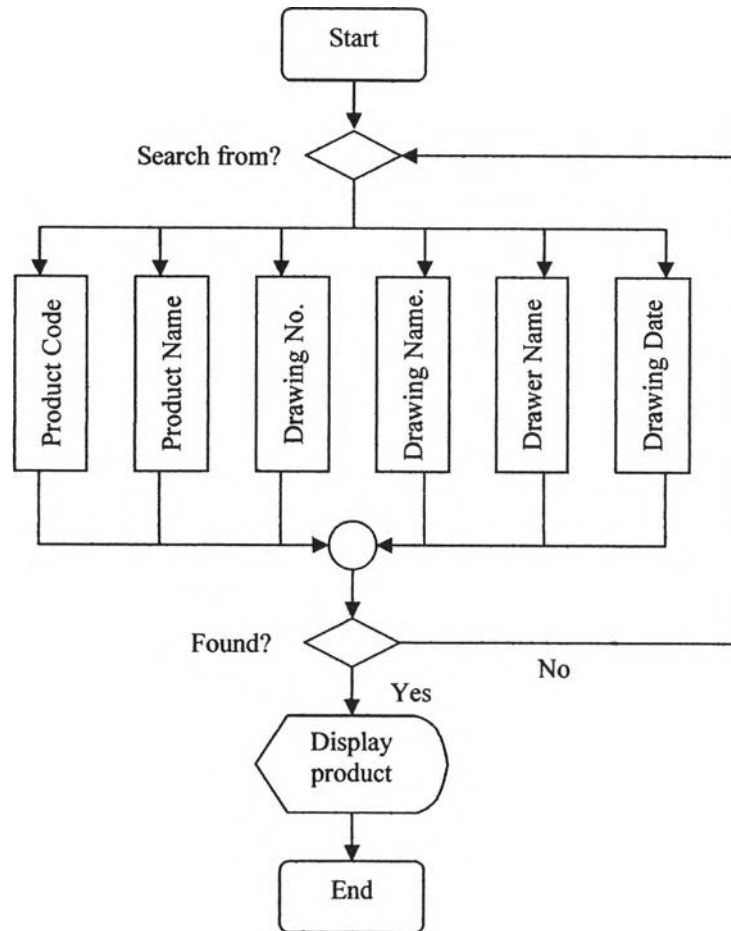


Figure 4.7: Operation chart of product search section

4.4.2 Non-assembly product add

User can add and code Non-assembly product in this section. The operation chart of Non-assembly product add can be illustrated in figure 4.8.

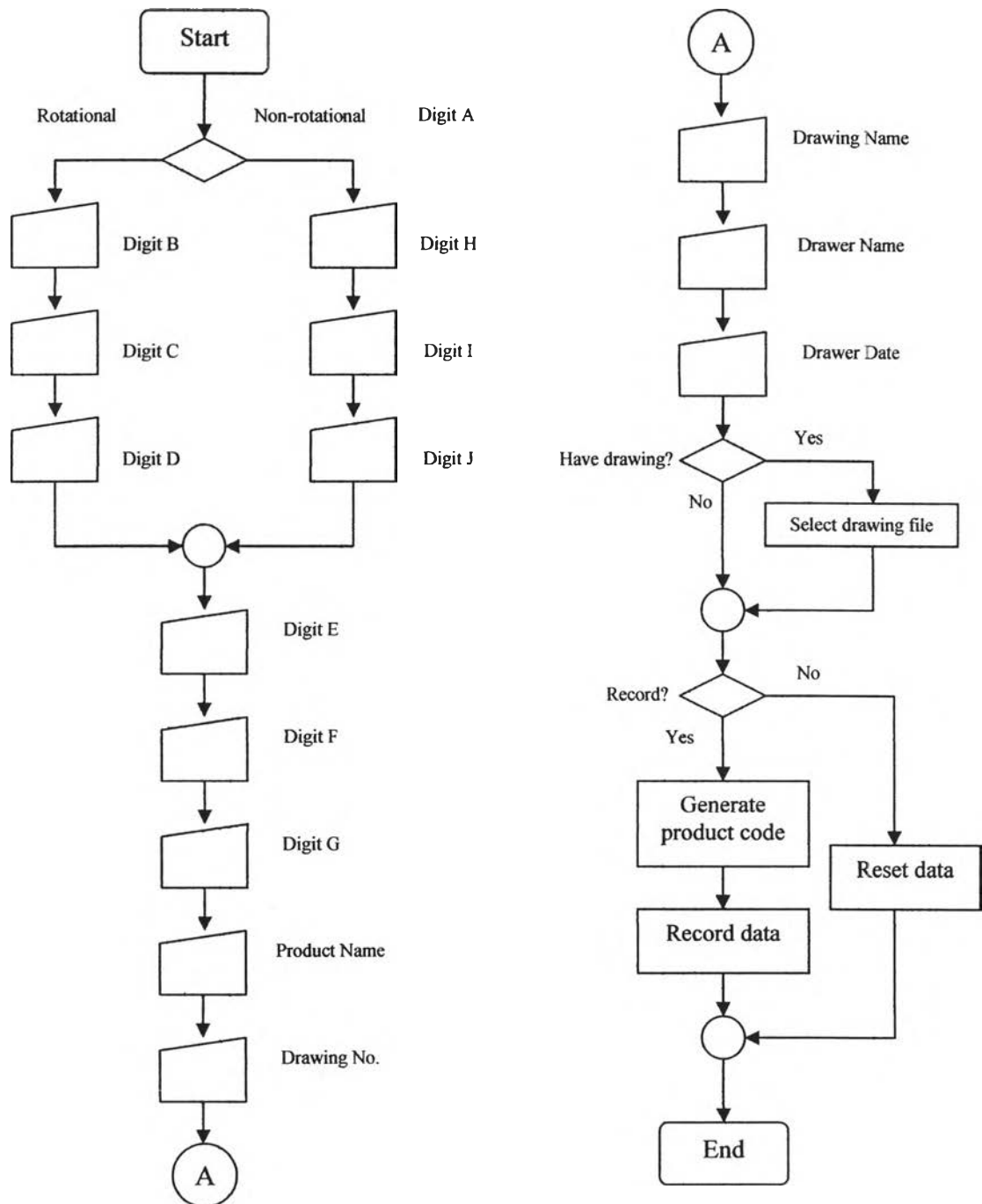


Figure 4.8: Operation chart of Non-assembly product add section

4.4.3 Non-assembly product edit

User can edit any data of Non-assembly product in this section. The operation chart of Non-assembly product edit can be illustrated in figure 4.9.

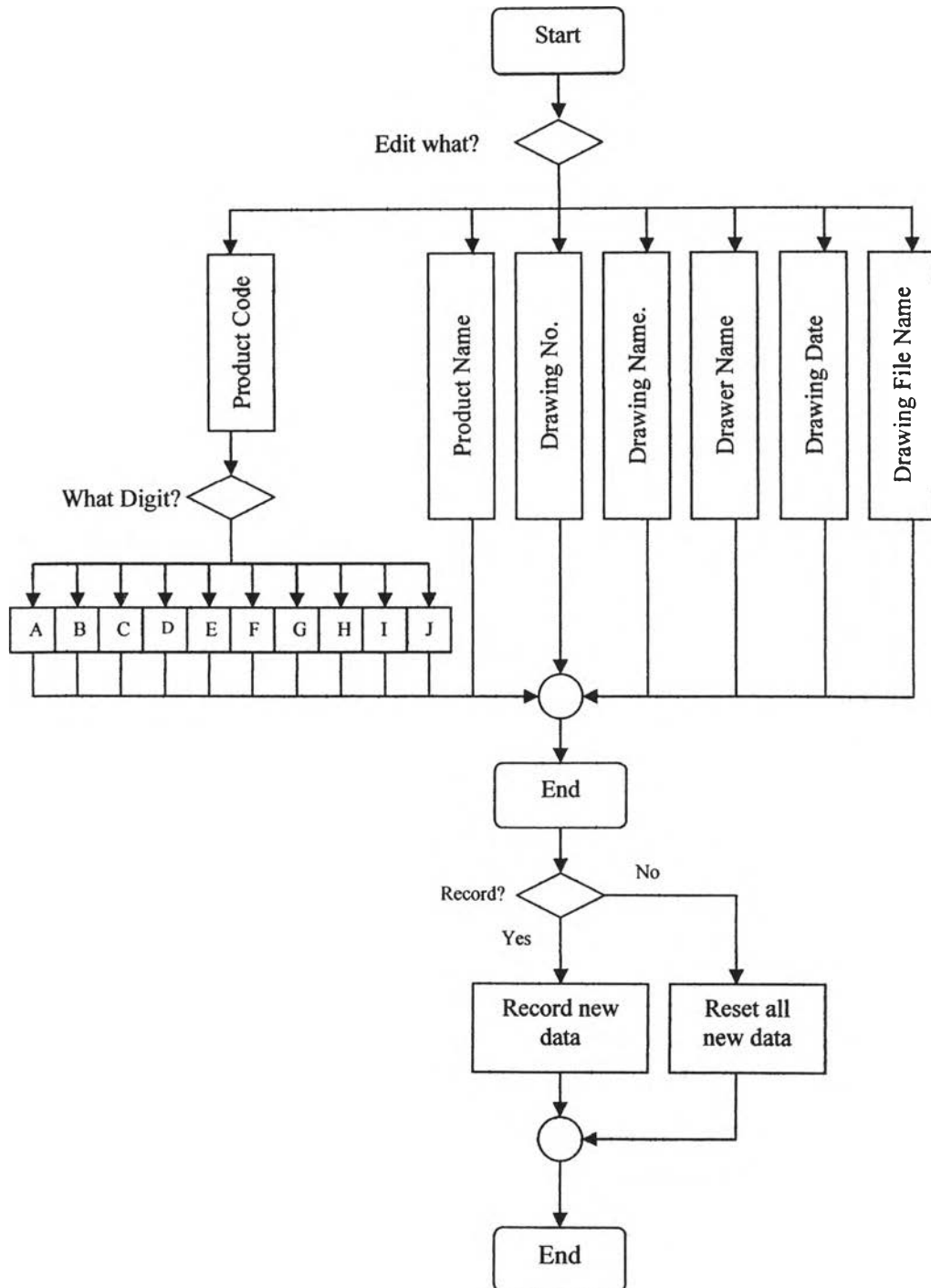


Figure 4.9: Operation chart of Non-assembly product edit section

4.4.4 Assembly product add

User can add and code Assembly product in this section. The operation chart of Assembly product add can be illustrated in figure 4.10.

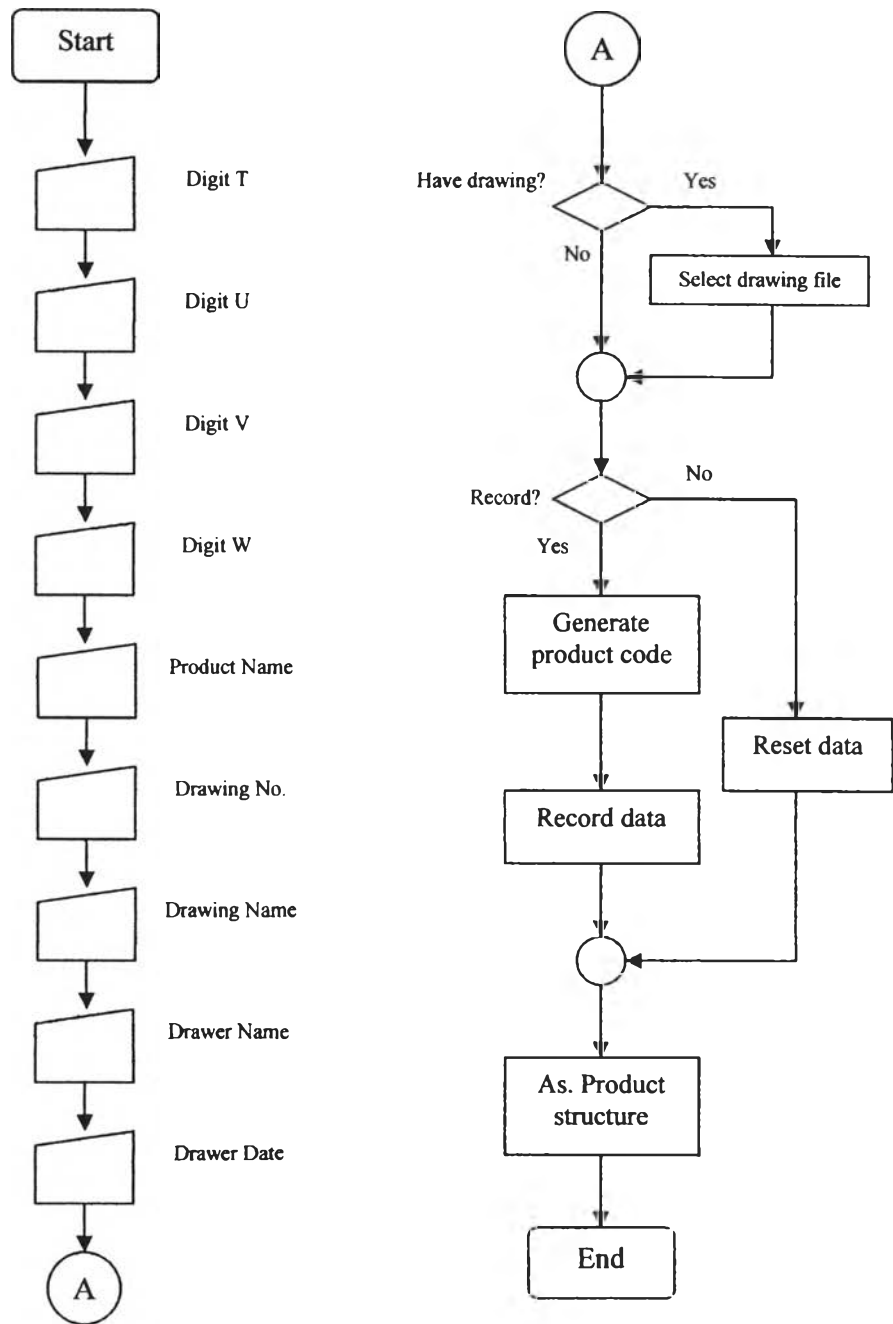


Figure 4.10: Operation chart of Non-assembly product add section

4.4.5 Assembly product edit

User can edit any data of Assembly product in this section. The operation chart of this section can be illustrated in figure 4.11.

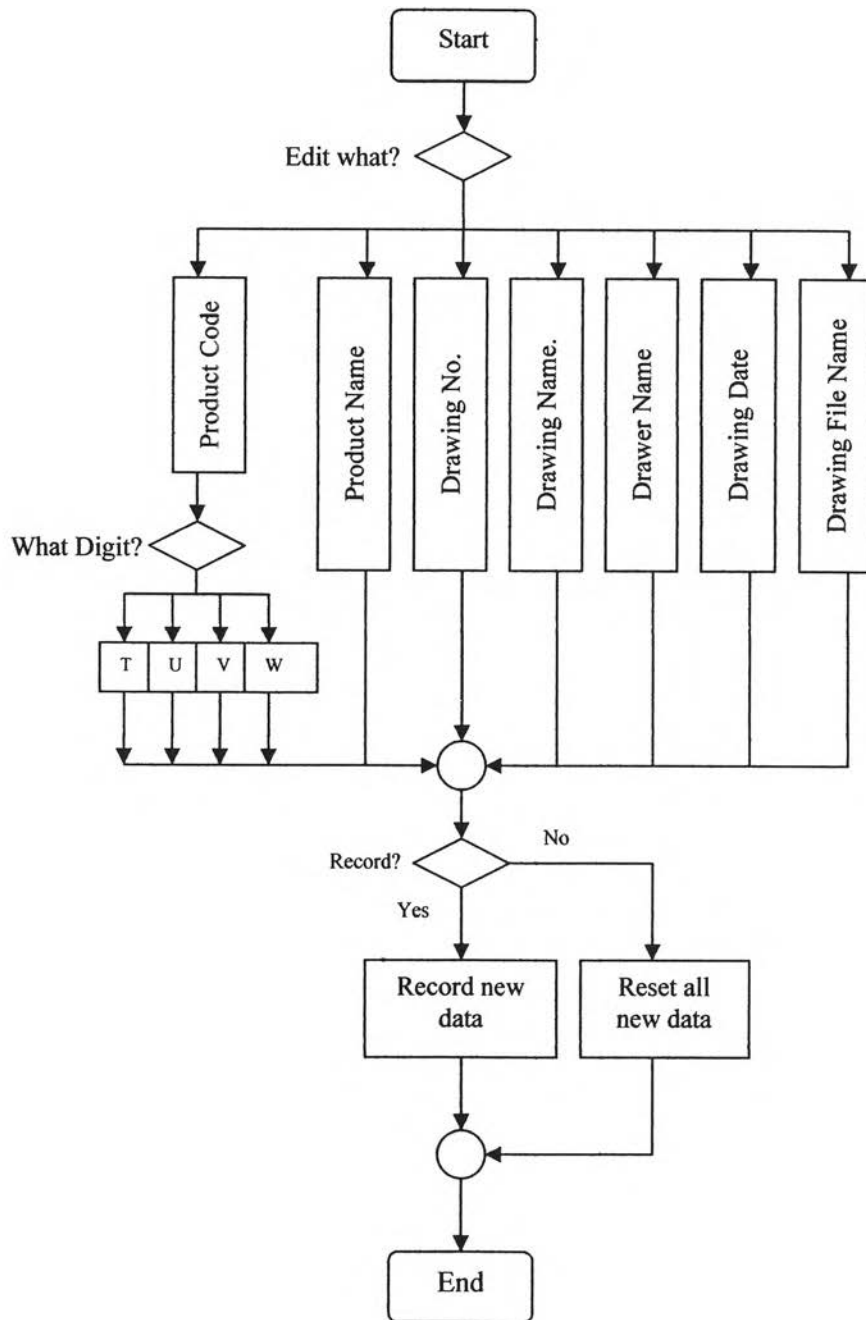


Figure 4.11: Operation chart of Non-assembly product edit section

4.4.6 Assembly product structure

In this section user can add or delete any non-assembly or assembly components. The structure of assembly products will be displayed for user. The operation chart of this section can be illustrated in figure 4.12.

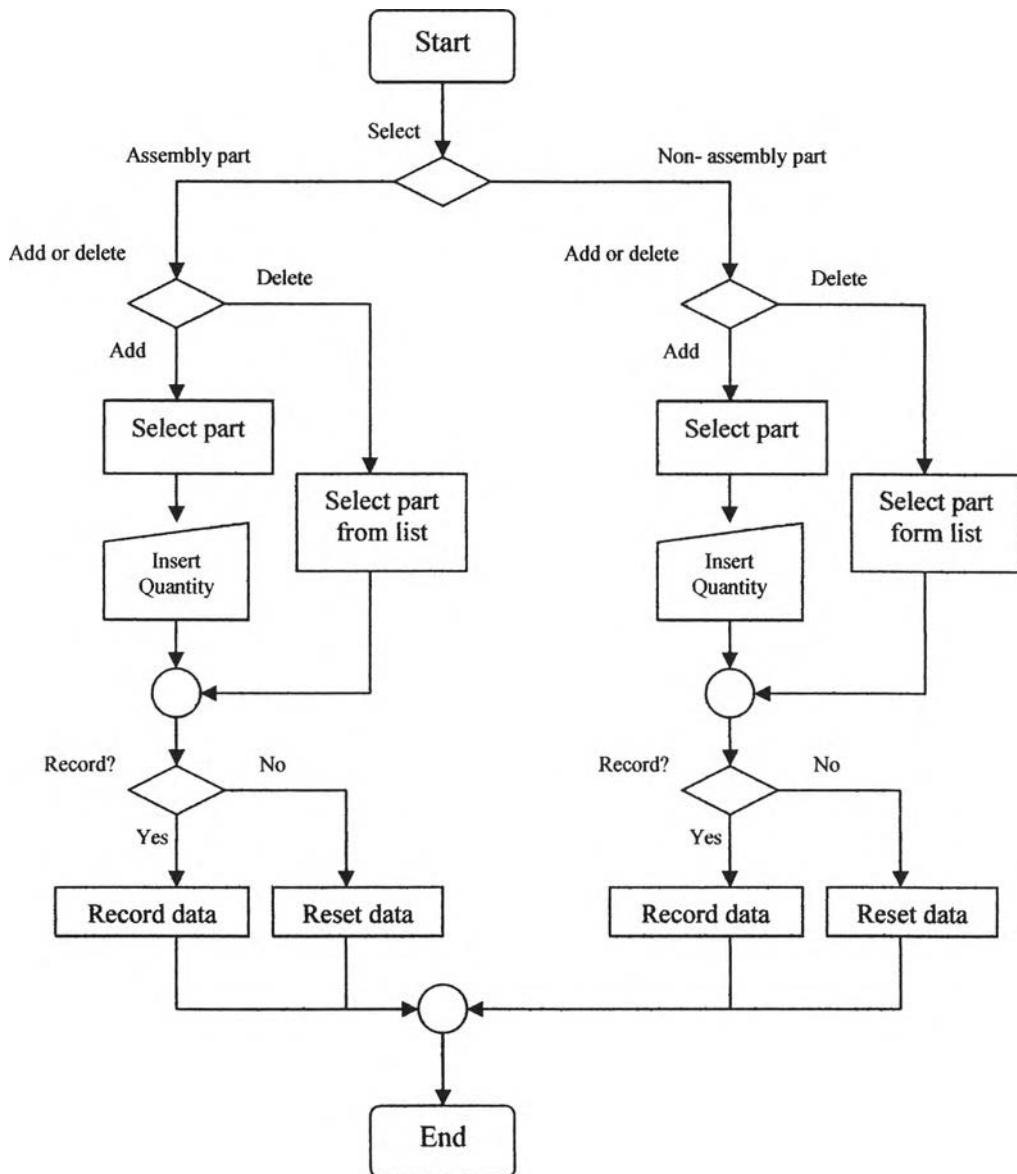


Figure 4.12: Operation chart of product structure section

4.5 Code installation structure

In this section, user can determine meaning of each digit of product code. The operation chart of this section can be illustrated in figure 4.13.

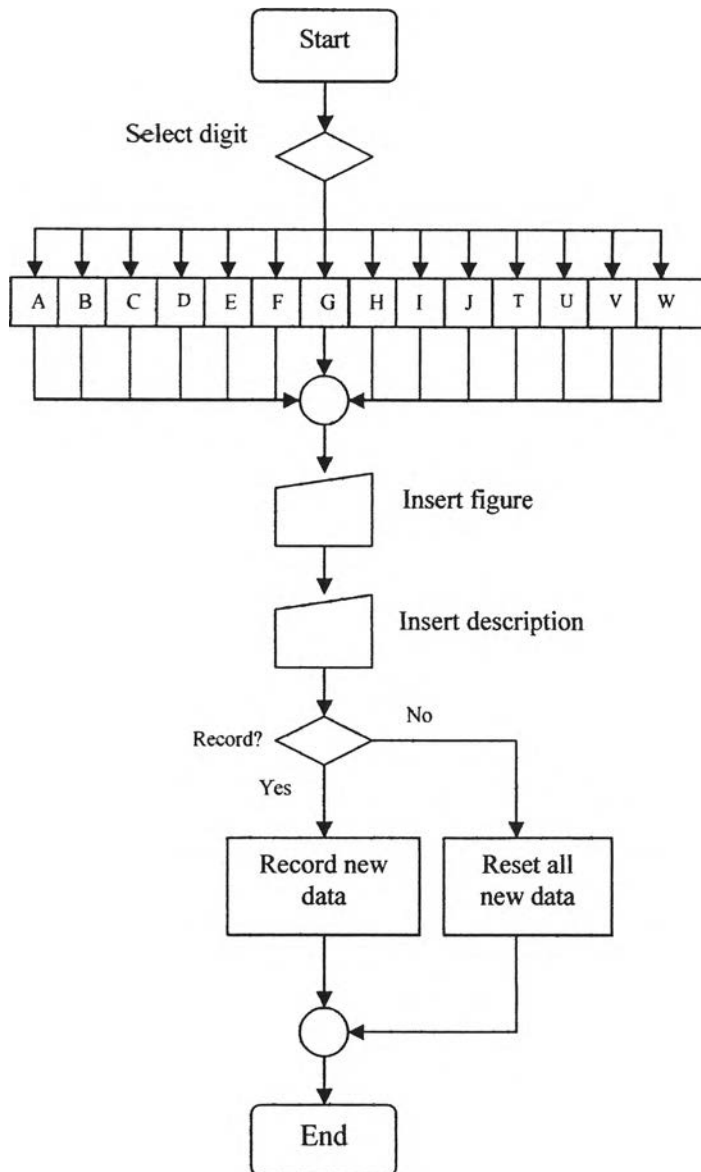


Figure 4.13: Operation chart of Code installation section

4.6 Data installation structure

In this section, information of customer, material, supplier, plating, operation, machine, and employee is recorded. This record will be used in WOS database section. The operation chart of data installation section can be illustrated in figure 4.14.

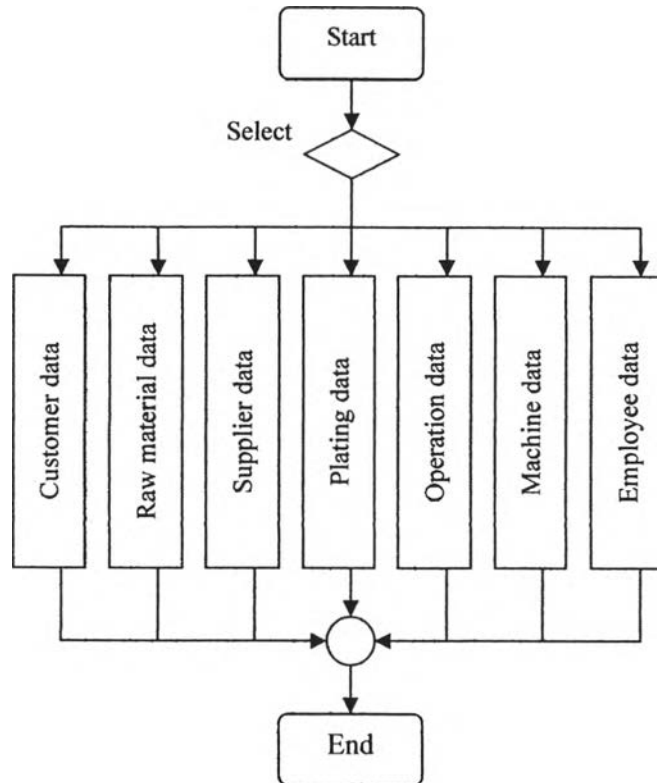


Figure 4.14: Operation chart of data installation section

4.6.1 Customer database

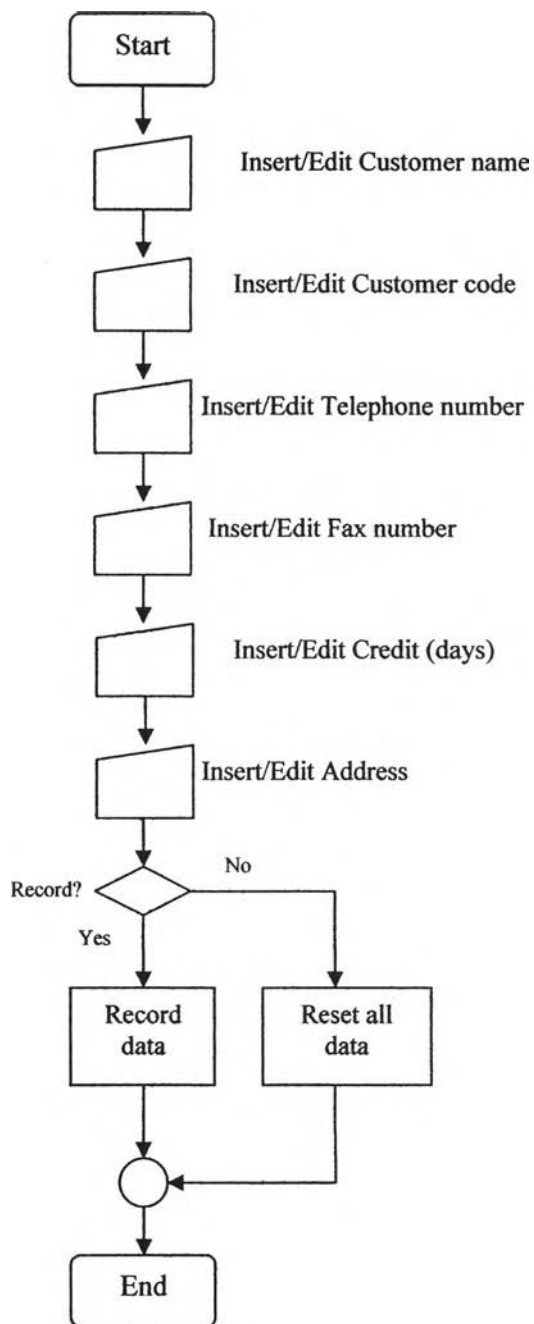


Figure 4.15: Operation chart of customer database

4.6.2 Raw material database

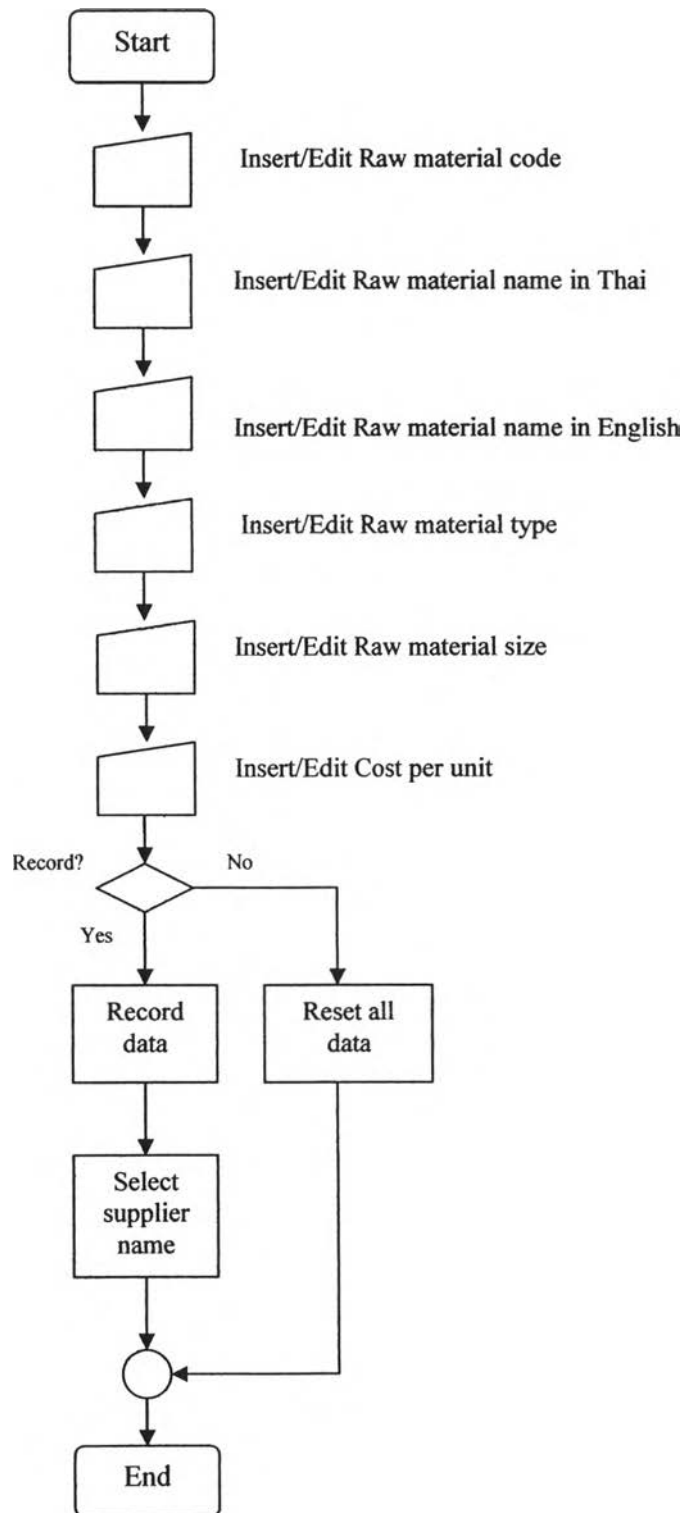


Figure 4.16: Operation chart of raw material database

4.6.3 Supplier database

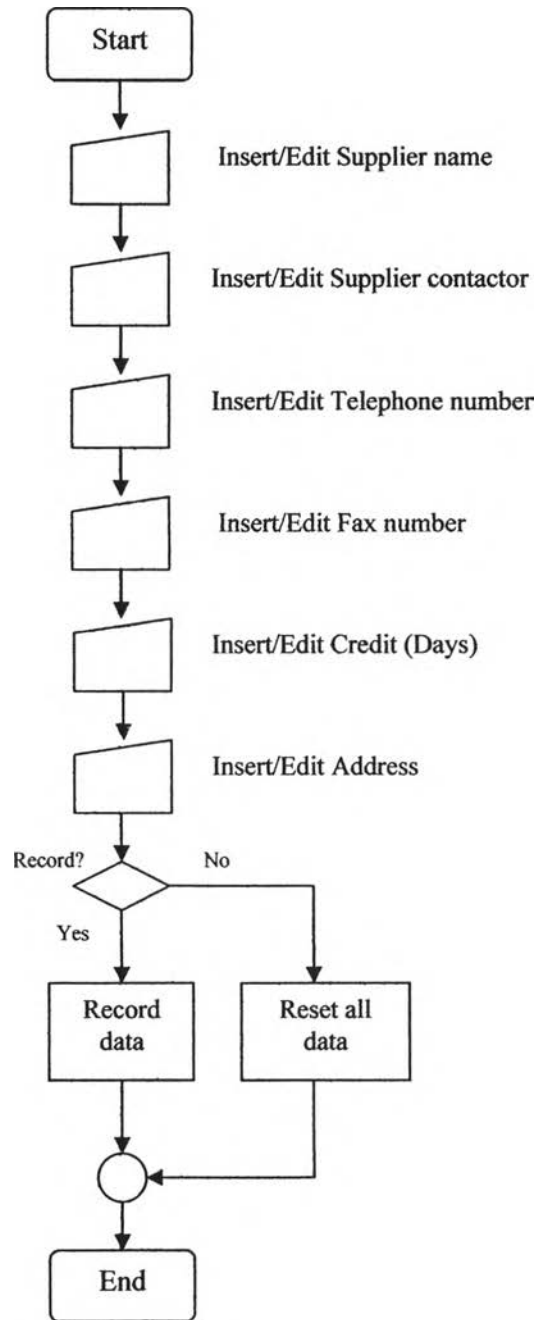


Figure 4.17: Operation chart of supplier database

4.6.4 Plating database

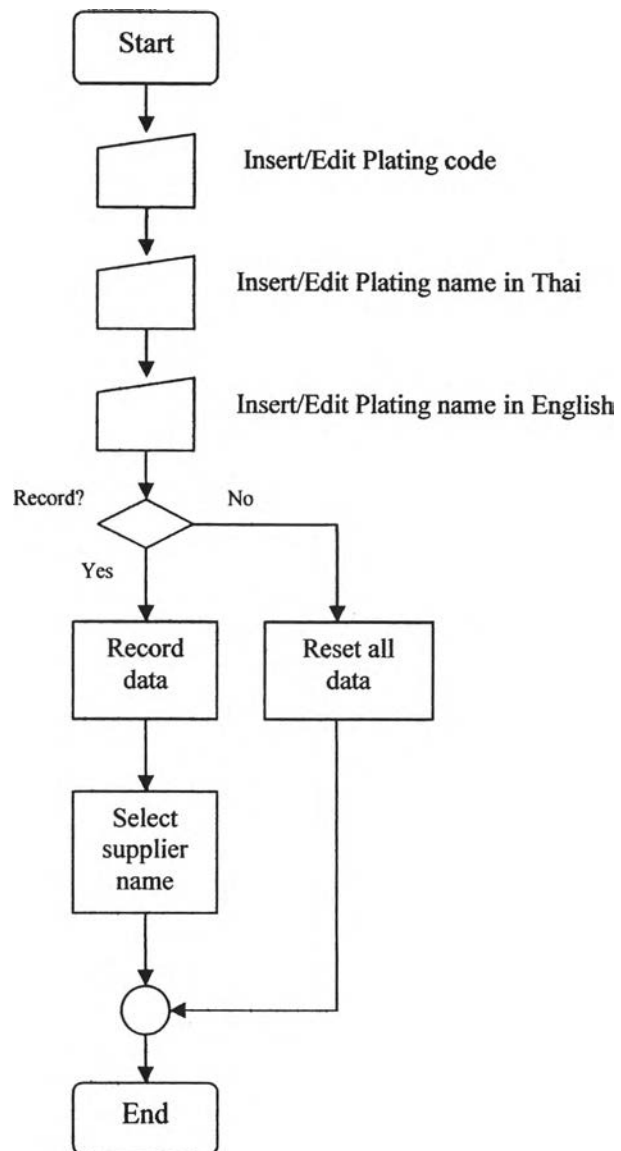


Figure 4.18: Operation chart of plating database

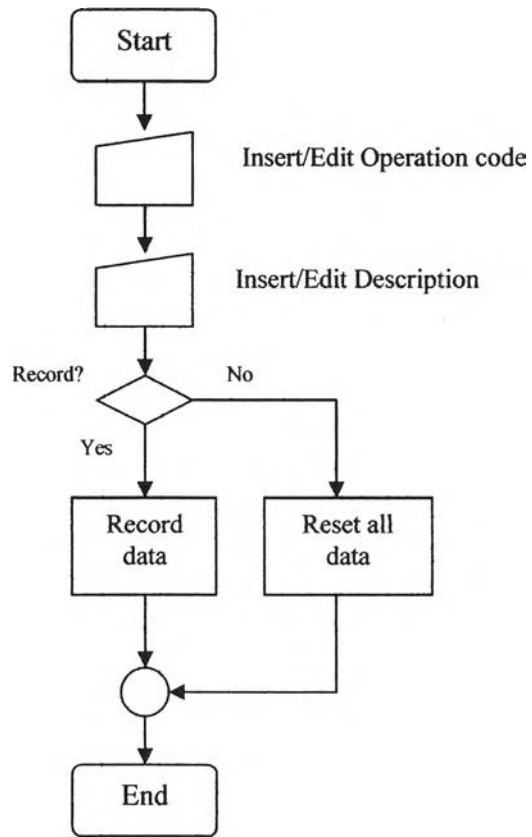
4.6.5 Operation database

Figure 4.19: Operation chart of operation database

4.6.6 Machine database

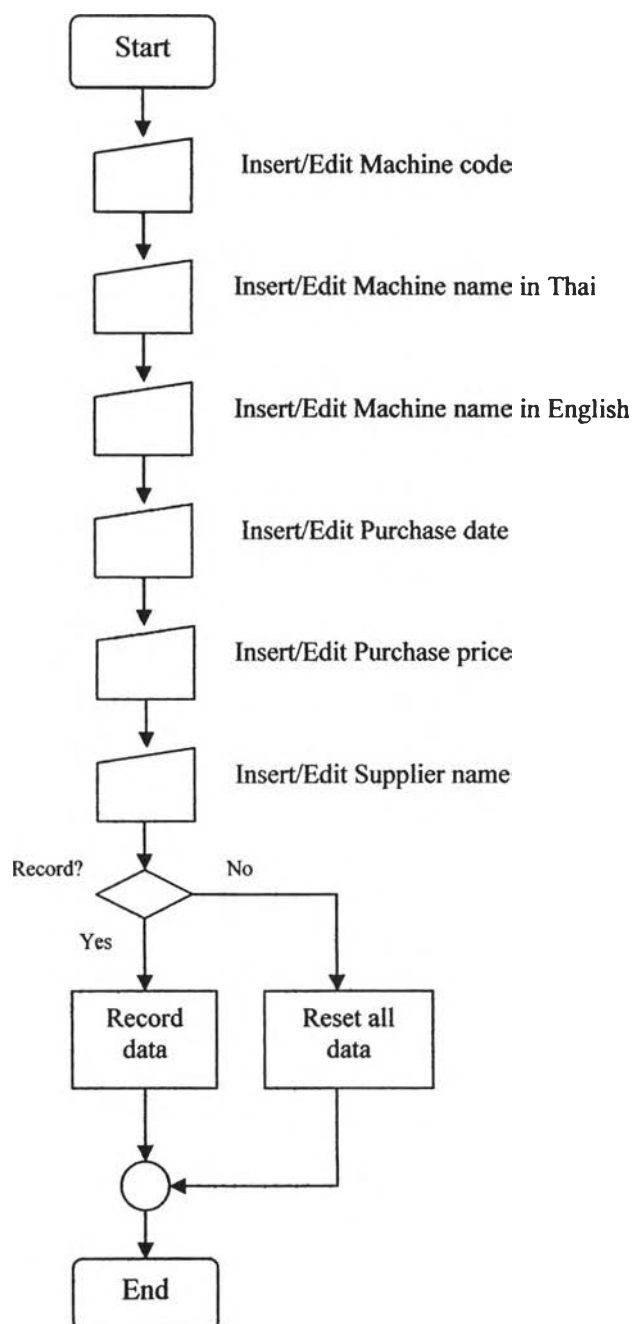


Figure 4.20: Operation chart of machine database

4.6.7 Employee database

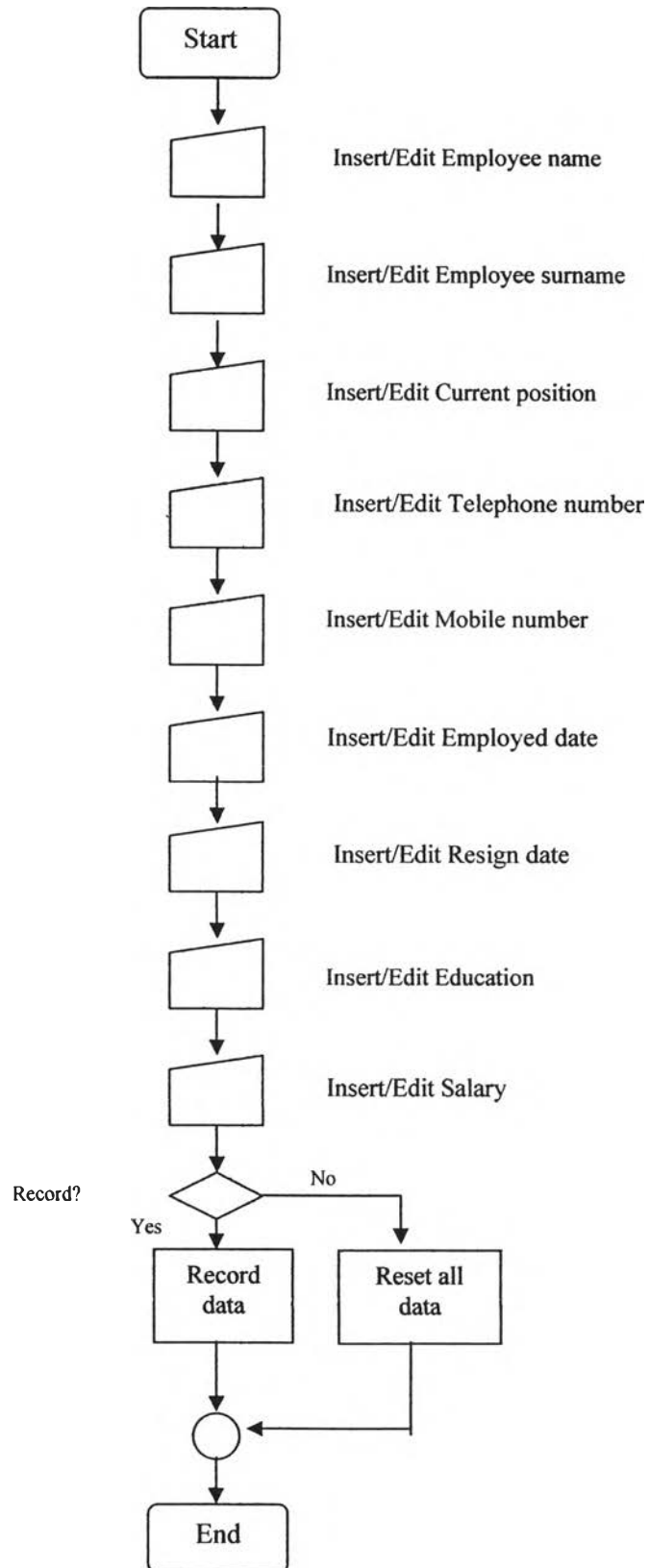


Figure 4.21: Operation chart of employee database

4.7 Conclusions

For conclusion, the system is divided into five main sections having different operations. These operations have different structures, which have been presented already. Figure 4.1 illustrates the overall structure of the system.

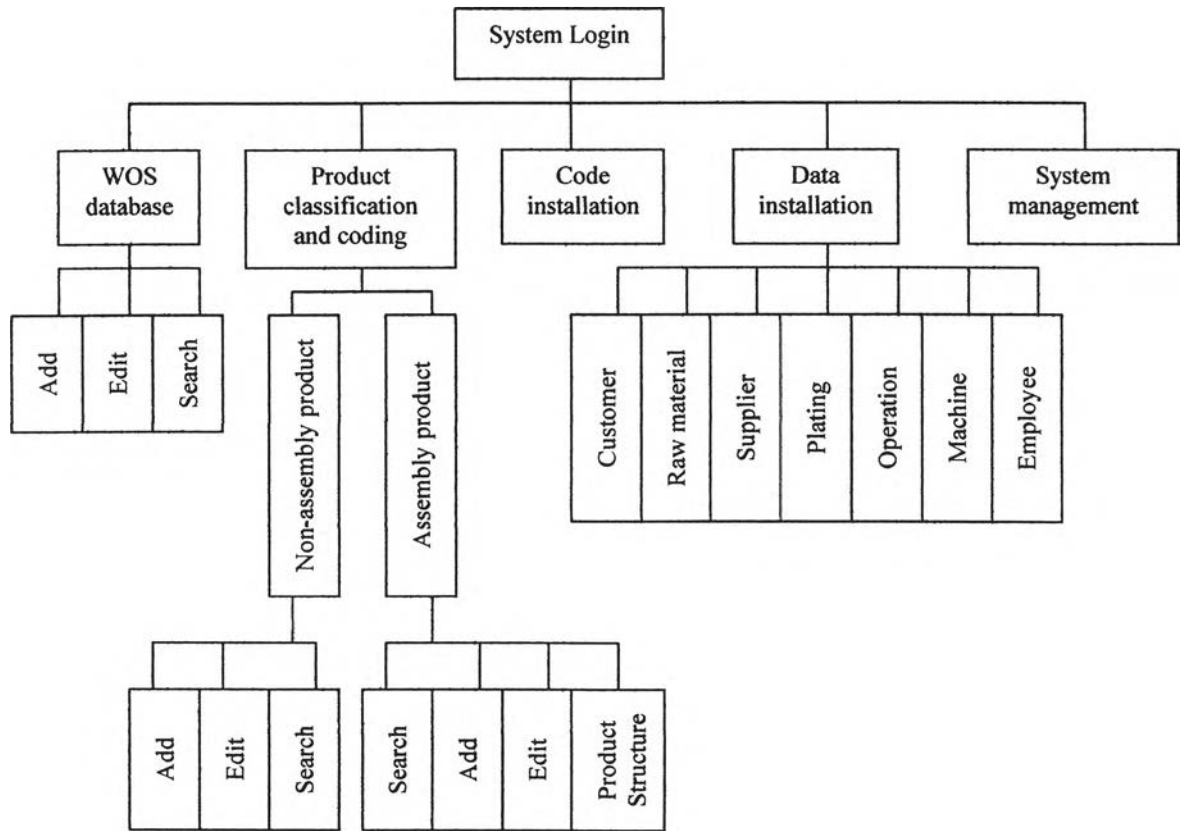


Figure 4.22: Operation structure of the system

From the figure, there are 17 sections that have different operations structure. The first two sections, which are WOS database and product classification and coding, are main sections used by common users. However, they will not be able to be used if the administrator does not complete the code installation section and data installation section first. Since the data installed in both sections are used when user codes a product or record a WOS, they must be completed initially. Consequently, the following steps have to be done by the system administrator at the first time of using.

Step 1: First of all, administrator has to install code definition in the code installation section. Then the product classification and coding section will be ready to be used.

Step 2: When code installation section is done, administrator should begin the data installation section. Information in this section will allow user to operate the WOS database section.

Step 3: After products have been coded from the product classification and coding section, user will be able to record the WOS of them.