計算機程式設計 HW5-2 report　　103061223 李俊穎

The homework 5-2 what we need to do is adjusting the codes to analyze the total number of customers visited, how long does a customer spend in the system, and total number of times each menu item is selected. Besides, we need to simulate 100 customers to use this Customer Service Center and their choices to the item. It means that we have to generate the program automatically. After the program execute, we also need to output in a txt file. How to produce the choices selected by the customers is using the random. After I asked for the classmates and TA, I just adapted some part of the hw5-1. The following is the codes of hw5-2：

```cpp
int main()
{
int runtimes=100,count;
  int o,k,i,h;
srand(time(NULL));
for(count=0;count<runtimes;count++){
        cout<<setw(6)<<"Customers log in:"<<endl<<endl;
        cout<<setw(6)<<"Enter your name and identity card"<<endl;
        na=rand()%3;
        openfile<<"The customer is "<<nam[na]<<",your choices are the
following:"<<endl;
        do{
        cout <<setw(6)<< "Welcome to our Customer Service
Center,the following is home menu.Please choose you option: " <<
endl;
        cout <<setw(6)<< "A.Product usage" << endl;
        cout <<setw(6)<< "B.Product inuqiry" << endl;
        cout <<setw(6)<< "C.Leave system" << endl;
        o=rand()%3+1;

        if(o==1)
        {
                a++;
```

```
do
{
………………
………………
………………
………………
}while(k!=4);
}
```

Because the lines of codes in do-while loop are too many, I omit them in the above.

However, the concept of it is that I replace all the cin>> into the rand() and define

it as a variable, and change all the condition operators in if-else, do-while loop,

switch-case. Then the program can run automatically without we input the data

because it don't need to stop to wait us enter the choices. The other problem is to

analyze the total number of times each menu item is selected. It just need to add the

a++, b++,…etc. in any loop to add up the value, and cout all of them in the final of

program , then we can know all the analysis what we want. It also use the similar

concept to produce random purchase date, address, and name which stored in array.

This homework let me know how to apply the rand() in our program and realize it's

importance!