OS LAB PROJECT

Topic – Banking Loan System

• <u>ABSTRACT</u> :

This project mainly deals with the automation activities performed while granting new loan. It keeps record of their customers and their loan details. Based on certain parameters, their loan requests are scheduled.

• <u>INTRODUCTION</u> :

Banking Loan System project is used for computerization of back office activities involved in loan application processing work. It is a very efficient project to handle all loan related transaction efficiently. This is very helpful for loan providing organization for customer registration and loan approval and scheduling process.
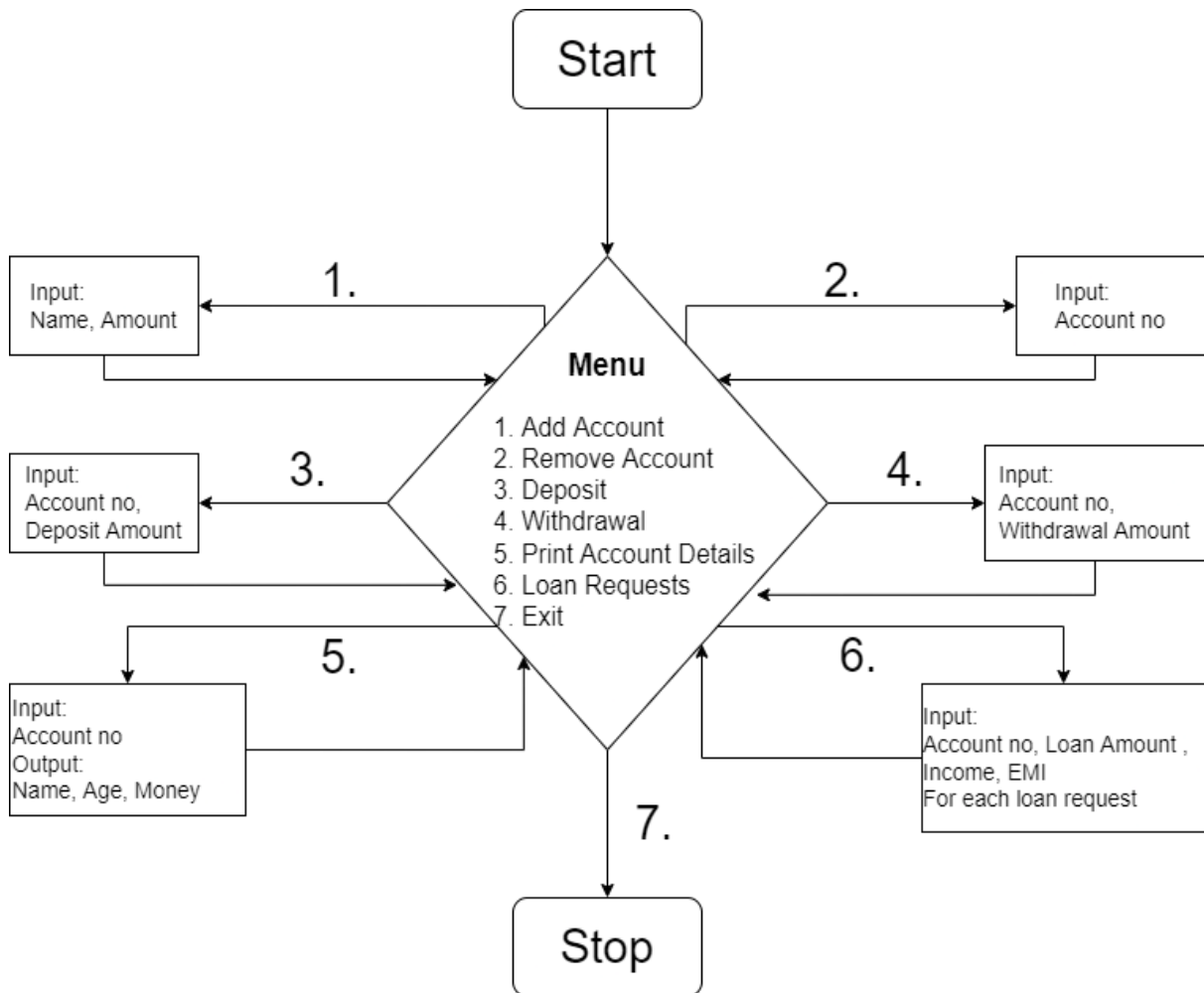
• <u>THEORY</u> :

The following project uses the concept of **Priority Based Scheduling** to schedule the loan requests of the account holders. Priority Scheduling is a method of scheduling processes that is based on priority. In this algorithm, the scheduler selects the tasks to work as per the priority.

The processes with higher priority should be carried out first, whereas jobs with equal priorities are carried out on a round-robin or FCFS basis. Priority depends upon memory requirements, time requirements, etc.

• <u>PROBLEM STATEMENT :</u>

Manage the accounts created in a bank and the transactions in different accounts. Also, schedule the loan requests of the account holders based on some parameters like income and other factors in C++ language.

• FLOW CHART:

Start

Menu

1. Add Account
2. Remove Account
3. Deposit
4. Withdrawal
5. Print Account Details
6. Loan Requests
7. Exit

1. Input: Name, Amount

2. Input: Account no

3. Input: Account no, Deposit Amount

4. Input: Account no, Withdrawal Amount

5. Input: Account no Output: Name, Age, Money

6. Input: Account no, Loan Amount, Income, EMI For each loan request

7. Stop

• CODE EXPLANATION :

Our Code include 5 things:

We use priority scheduling algorithm for deciding the priority for giving the loan to the borrower.

1 – Add Account

This takes Your name ,Age and balance

And show the detail

```
1. Add Account
2. Remove Account
3. Deposit
4. Withdrawal
5. Print Account detail
6. Loan Requests
7. Exit

Choose an option: 1
Enter your Name: Nityam Prabhat
Enter your Age: 19
Enter the money you want to deposit: 20000

Account has been created
Your account details are:
Account No: 1000
Account Holder Name: Nityam Prabhat
Age: 19
Balance in your Account is: 20000

Choose an option: 7
Exiting the program...
PS D:\VS Code\Project> []
```

2 – Remove Account

Input – Account No

If Account Not found then

Output – No Account with this Account No

Else:

Output – Account has been deleted

```
Exiting the program...
4. Withdrawal
5. Print Account detail
6. Loan Requests
7. Exit

Choose an option: 1
Enter your Name: Nityam Prabhat
Enter your Age: 19
Enter the money you want to deposit: 20000

Account has been created
Your account details are:
Account No: 1000
Account Holder Name: Nityam Prabhat
Age: 19
Balance in your Account is: 20000

Choose an option: 1
Enter your Name: Sameer Pandey
Enter your Age: 19
Enter the money you want to deposit: 40000

Account has been created
Your account details are:
Account No: 1001
Account Holder Name: Sameer Pandey
Age: 19
Balance in your Account is: 40000

Choose an option: 2
Enter your account no. 1000

Account of Nityam Prabhat has been deleted

Choose an option: 5
Enter your Account No: 1000
No account with this account number
```

3 – Deposit

Input – Account No, Balance

If Account found then

Output – Your new balance is ..

Else

Output – No Account with this Account No

```
Menu
1. Add Account
2. Remove Account
3. Deposit
4. Withdrawal
5. Print Account detail
6. Loan Requests
7. Exit

Choose an option: 1
Enter your Name: Nityam Prabhat
Enter your Age: 19
Enter the money you want to deposit: 40000

Account has been created
Your account details are:
Account No: 1000
Account Holder Name: Nityam Prabhat
Age: 19
Balance in your Account is: 40000

Choose an option: 3
Enter account no. 1000
Enter the deposit amount: 20000
Your New balance is: 60000

Choose an option: 3
Enter account no. 100002
No account with this account number
```

4 – Withdraw

Input – Account No, Balance

Output – If Account Found then && and enough Money

 Your new balance is …

Else if Not enough money

You don't have enough money

Your account balance is..

Else

No Account with this Account No

```
1. Add Account
2. Remove Account
3. Deposit
4. Withdrawal
5. Print Account detail
6. Loan Requests
7. Exit

Choose an option: 1
Enter your Name: Nityam Prabhat
Enter your Age: 19
Enter the money you want to deposit: 40000

Account has been created
Your account details are:
Account No: 1000
Account Holder Name: Nityam Prabhat
Age: 19
Balance in your Account is: 40000

Choose an option: 3
Enter account no. 1000
Enter the deposit amount: 20000
Your New balance is: 60000

Choose an option: 3
Enter account no. 100002
No account with this account number

Choose an option: 4
Enter account no. 10004
No account with this account number

Choose an option: 4
Enter account no. 1000
Enter the withdrawal amount: 70000
You do not have enough balance
Your balance is: 60000

Choose an option: 4
Enter account no. 1000
Enter the withdrawal amount: 10000
Your New balance is: 50000
```

5 – Show detail

Input – Account No

If Not Found then

Output – No Account with this Account No

Else:

Output – Details of that Account

```
1. Add Account
2. Remove Account
3. Deposit
4. Withdrawal
5. Print Account detail
6. Loan Requests
7. Exit

Choose an option: 1
Enter your Name: Nityam Prabhat
Enter your Age: 19
Enter the money you want to deposit: 40000

Account has been created
Your account details are:
Account No: 1000
Account Holder Name: Nityam Prabhat
Age: 19
Balance in your Account is: 40000

Choose an option: 1
Enter your Name: Kushal Kanaw
Enter your Age: 19
Enter the money you want to deposit: 20000

Account has been created
Your account details are:
Account No: 1001
Account Holder Name: Kushal Kanaw
Age: 19
Balance in your Account is: 20000

Choose an option: 5
Enter your Account No: 1001

Your account details are:
Account No: 1001
Account Holder Name: Kushal Kanaw
Age: 19
Balance in your Account is: 20000
```

6 – Loan Requests

Input – Any Loan Requests

- Yes/No
- If yes
  - ➔ Then input account No, Loan amount,income, emi
- If no
  - ➔ Priority of all the loan requests
  - ➔ We use score for calculating the priority of different requests

```
           Menu
1. Add Account
2. Remove Account
3. Deposit
4. Withdrawal
5. Print Account detail
6. Loan Requests
7. Exit

Choose an option: 1
Enter your Name: Nityam Prabhat
Enter your Age: 19
Enter the money you want to deposit: 20000

Account has been created
Your account details are:
Account No: 1000
Account Holder Name: Nityam Prabhat
Age: 19
Balance in your Account is: 20000

Choose an option: 1
Enter your Name: Sameer Pandey
Enter your Age: 19
Enter the money you want to deposit: 50000

Account has been created
Your account details are:
Account No: 1001
Account Holder Name: Sameer Pandey
Age: 19
Balance in your Account is: 50000

Choose an option: 1
Enter your Name: Kushal Kanaw
Enter your Age: 19
Enter the money you want to deposit: 10000
```

```
Account has been created
Your account details are:
Account No: 1002
Account Holder Name: Kushal Kanaw
Age: 19
Balance in your Account is: 10000

Choose an option: 1
Enter your Name: Ishita Gupta
Enter your Age: 19
Enter the money you want to deposit: 30000

Account has been created
Your account details are:
Account No: 1003
Account Holder Name: Ishita Gupta
Age: 19
Balance in your Account is: 30000

Choose an option: 1
Enter your Name: Udeshya Aagre
Enter your Age: 19
Enter the money you want to deposit: 40000

Account has been created
Your account details are:
Account No: 1004
Account Holder Name: Udeshya Aagre
Age: 19
Balance in your Account is: 40000
```

```
Choose an option: 6
Any loan request?(y/n): y

Loan Request 1:

Enter account No. : 1000
Name of borrower: Nityam Prabhat
Enter loan amount: 100000
Enter income of the borrower: 15000
Enter EMI borrower can pay: 3000
Any other loan request?(y/n): y

Enter income of the borrower: 20000
Enter EMI borrower can pay: 5000
Any other loan request?(y/n): y

Loan Request 3:

Enter account No. : 1002
Name of borrower: Kushal Kanaw
Enter loan amount: 250000
Enter income of the borrower: 5000
Enter EMI borrower can pay: 1000
Any other loan request?(y/n): y

Loan Request 4:

Enter account No. : 1003
Name of borrower: Ishita Gupta
Enter loan amount: 500000
Enter income of the borrower: 20000
Enter EMI borrower can pay: 6000
Any other loan request?(y/n): y

Loan Request 5:

Enter account No. : 1004
Name of borrower: Udeshya Aagre
Enter loan amount: 1000000
Enter income of the borrower: 30000
Enter EMI borrower can pay: 10000
```
```
Any other loan request?(y/n): n

The loan requests will be processed in the given order:

Acc_no          name              Loan amount
1000            Nityam Prabhat          100000
1001            Sameer Pandey           400000
1003            Ishita Gupta            500000
1004            Udeshya Aagre          1000000
1002            Kushal Kanaw            250000
```