DATA STRUCTURES (SE-201)

MTE PROJECT REPORT

PROJECT TOPIC:
FLAT DEALING SYSTEM

Under the guidance of:
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PROBLEM DEFINITION

The flat dealer has to face so many problems while managing the records of the buyers on paper. So there's a need to make a program that manages all the records efficiently and gives the user/buyer various facilities to put a flat on hold, edit a record, delete a record, etc. and also implement a linked list for grouping same flat types.

OBJECTIVES

* To design a program which help the flat dealer to manage the records of buyers properly.
* To design a program which help customers to choose, change or even delete their choice without any hesitation.
* To design a program which provide a service to customers to book their flats online.

GROUP MEMBER'S CONTRIBUTION

Done by Krish Saini :

```
void add();              //to book a room
void display();          //to display the particular customer record
void rooms();            //to display alloted rooms
void edit();             //to edit the customer record
int check(int);          //to check room status
void modify(int);        //to modify the record
int delete_rec(int);     //to delete the record
```
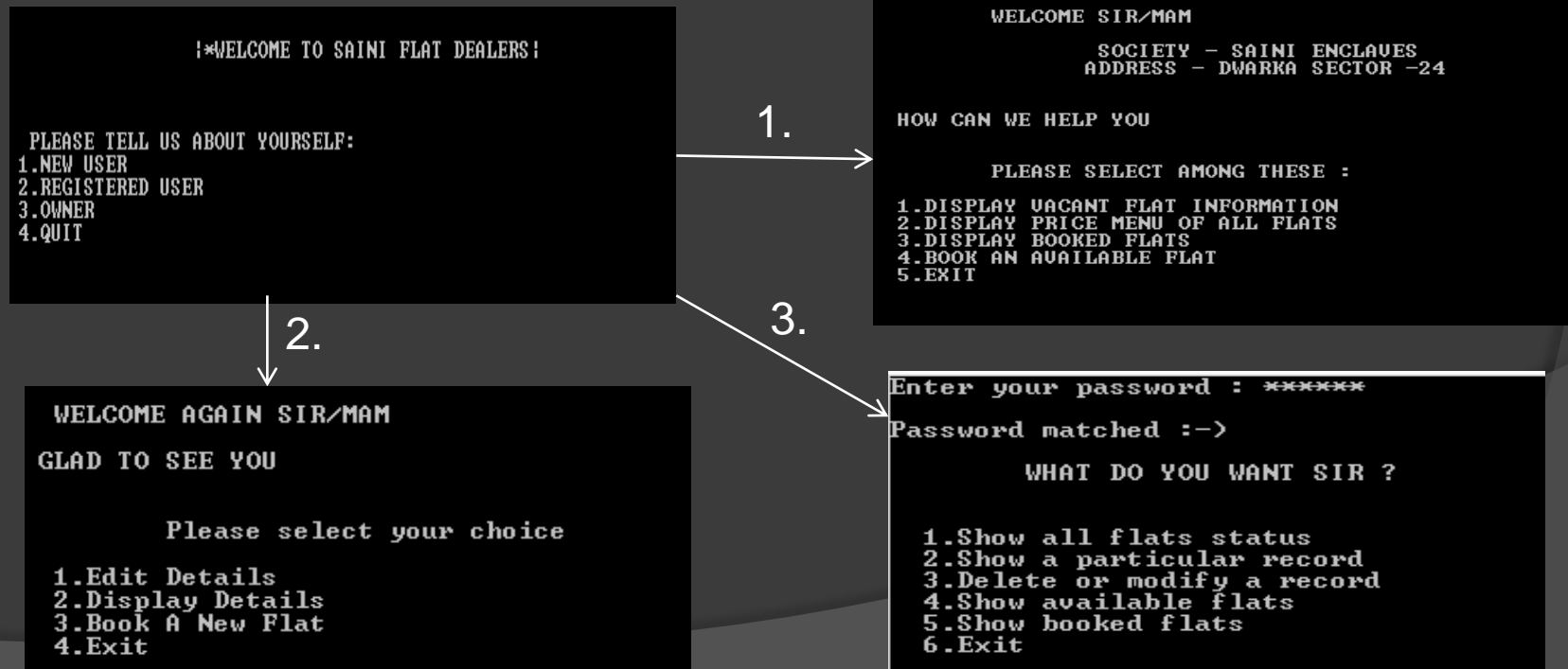
Done by Gaurav Saini :

```
void main_menu();        //to dispay the main menu
void Insert(int);        //to create linked list
void displaybooked():    //to display booked flats
void deleteNode(int);    //to delete the record from linked list
void pricelist();        //to display the price menu of flats
void displayvac();       //to display vacant flats
```

MODULES OF PROJECT

❖ **void main_menu()**

This function has been built to give the initial choice to the user. Here the user is first asked about himself that if he's a new user, a registered user, or the owner of flats. Also if the user is owner, then he's asked for a password and the further choices are given only if the password matches.


```
!*WELCOME TO SAINI FLAT DEALERS!


 PLEASE TELL US ABOUT YOURSELF:
1.NEW USER
2.REGISTERED USER
3.OWNER
4.QUIT
```

1.

```
WELCOME SIR/MAM

          SOCIETY - SAINI ENCLAVES
          ADDRESS - DWARKA SECTOR -24

HOW CAN WE HELP YOU

     PLEASE SELECT AMONG THESE :

1.DISPLAY VACANT FLAT INFORMATION
2.DISPLAY PRICE MENU OF ALL FLATS
3.DISPLAY BOOKED FLATS
4.BOOK AN AVAILABLE FLAT
5.EXIT
```

2.

```
 WELCOME AGAIN SIR/MAM

GLAD TO SEE YOU

        Please select your choice

1.Edit Details
2.Display Details
3.Book A New Flat
4.Exit
```

3.

```
Enter your password : ******

Password matched :->

        WHAT DO YOU WANT SIR ?

1.Show all flats status
2.Show a particular record
3.Delete or modify a record
4.Show available flats
5.Show booked flats
6.Exit
```

❖ **void pricelist()**

This function is used to give an idea of flats to our new user. It displays the price list of all the flat types.

```
Here's the menu of flats we are offering you :
 Room No.        Category           Type        Area(sq. ft)   Price(Rs.)
 100-102         1 BHK            Front Facing       683          30 Lac
 103-105         1 BHK            Back Facing        683          28 Lac
 106-109         1 BHK Corner      2 side open       703          32 Lac
 200-202         2 BHK            Front Facing       875          40 Lac
 203-205         2 BHK            Back Facing        875          38 Lac
 206-209         2 BHK Corner      2 side open       959          45 Lac
 300-302         3 BHK            Front Facing      1314          55 Lac
 303-305         3 BHK            Back Facing       1314          53 Lac
 306-309         3 BHK Corner      2 side open      1398          60 Lac

        PLEASE SELECT AMONG THESE :

 1.DISPLAY VACANT FLAT INFORMATION
 2.DISPLAY PRICE MENU OF ALL FLATS
 3.DISPLAY BOOKED FLATS
 4.BOOK AN AVAILABLE FLAT
 5.EXIT
```

❖ **int check(int)**

This function is used to check whether entered record is present in file or not.

This function is useful because it prevents overwriting of same room number and also shows the errors when the searched record is not present.

```
Enter room no: 107

Sorry Room no. not found or vacant!!

Press any key to continue!!
```

```
Enter Room Number
**

Room no:
From 100-109 for 1 BHK Flats
From 200-209 for 2 BHK Flats
From 300-309 for 3 BHK Flats
100


Sorry..!!!Room is already booked
Press any key to continue!!
```

❖ **void displayvac()**
This function displays the number of vacant flats of each type, i.e. 1 bhk, 2bhk or 3 bhk.

```
Available 1 BHK flats = 8
Available 2 BHK flats = 9
Available 3 BHK flats = 9

Press any key to continue!!
```

❖ **void display()**
This function displays the record of a particular buyer. It takes the room number from the user for which he want the record, and then searches it with the records present in the file. If present, it displays the information of that buyer.

```
Customer Details
**

Room no: 105
Name: Gaurav Saini
Address: 45,Najafgarh
Phone no: 9873317980

Press any key to continue!!
```

❖ **void displaybooked()**
This function is used to display the room numbers of booked flats of each type.
This accesses the linked list which contains room numbers as data

```
2 BHK Booked Flats: 208
1 BHK Booked Flats: 105  100
ALL 3 BHK FLATS ARE AVAIALABLE

Press enter to continue...
```

❖ void edit()

This function is used to edit a particular record. It further provides two choices to user, i.e. to modify a record or to delete a record and calls the respective functions according to the choice.

```
EDIT MENU
****

 1.Modify Customer Record
 2.Delete Customer Record
 3.Exit
Enter your choice:
```

❖ void modify(int)

This function is used to modify the details of a particular customer. It searches the record with a room number in the file. If found, it allows the user to overwrite the details.

```
Enter room no: 100

Enter New Details
*
First Name: Krish

Last Name: Saini
Address: 483,GautamNagar
Phone no: 8826608233

Record is modified!!
Press any key to continue!!!
```

```
Customer Details
**

Room no: 100
Name: Krish Saini
Address: 483,GautamNagar
Phone no: 8826608233

Press any key to continue!!
```

❖ int delete_rec(int)

This function is used to delete the details of a particular customer. If found, it allows the user to delete that record from the file.

```
Enter room no: 306

Name: Pawan Rajput
Address: 921,KashmereGate
Phone No: 9999878867

Do you want to delete this record(y/n): y

Record has been successfully deleted !!

Press any key to continue!!!
```

```
                    List Of Rooms Allotted in a manner in which they are Boo
ked
            ***

Room No.    Name          Address       Phone No.

100         Krish Saini      483,GautamNagar    8826608233

105         Gaurav Saini     45,Najafgarh       9873317980

208         Shivan Bharti    32B,Ghaziabad      9677567430

208         Shivan Bharti    32B,Ghaziabad      9677567430

            Press any key to continue!!
```

❖ void rooms()

This function is used to display the details of all the buyers irrespective of their flat types. This displays the records in the order in which they were booked.

```
                    List Of Rooms Allotted in a manner in which they are Boo
ked
                    ***

Room No.          Name            Address              Phone No.

100               Krish Saini     483,GautamNagar      1234567890

100               Krish Saini     483,GautamNagar      1234567890

105               Gaurav Saini    45,Najafgarh         9873317980

208               Shivam Bharti   32B,Ghaziabad        9677567430

306               Pawan Rajput    921,KashmereGate          99998788
67

306               Pawan Rajput    921,KashmereGate          99998788
67

                    Press any key to continue!!
```

❖ void add()

This function is used to add a new user record to our file of records as well as to the linked list of room numbers. It first checks that the room entered by the user should not be pre booked. If it is available then it takes the details from the user. Then it calls Insert() function for inserting a new node in the linked list. After that it displays a message that the flat is put on hold.

```
Enter Room Number
**

Room no:
From 100-109 for 1 BHK Flats
From 200-209 for 2 BHK Flats
From 300-309 for 3 BHK Flats
100

  Please provide your details
First Name: Krish
Last Name: Saini
Address: 483,GautamNagar
Phone No: 1234567890

CONGRATS !!! Room is put on hold !!!
Press any key to continue!!
```

❖ void Insert(int)

This function is used to insert a new node in the linked list when a new user gets enrolled.
The linked list contains data in the form of room numbers of all the flats which are on hold. All these data nodes are linked to each other using pointers.
This is called inside the add() function when the user enters his details.

❖ **void deleteNode(int)**

This function is used to delete the data of user from the linked list who has cancelled his booking of flat.

This function is called in edit() function when the record is deleted from the file also.

This deletes the room number from the list and makes the next node as the head node.

CONCLUSION AND FUTURE WORK

It provides the simplest, cheapest and a less time and energy consuming way of dealing. In old days, the Dealer may have to keep records of the properties manually. This method of keeping the records is quiet time consuming and less efficient. Also there are more chances of mistakes by keeping the records manually as human beings are habitual of doing mistakes.
 So with the help of this, Flat Dealing Software, the chances of mistakes becomes very few. Also it is very efficient method of keeping the records of flats sold as well as unsold flats. It consumes very less time as compared to manual method. The admin i.e. the Flat Dealer itself will handle the whole software. He'll manage the database as well as all the records. And also he can hand it over to the user to update his details and check out the varieties as his data is secured with password which is privately entered.
Also in future, we can add billing system in this project which as of now was a tough job to implement. Then the owner will be able to keep a record of all the money transactions as well efficiently. And then the flat will be booked only after the user pays some amount of money.

THANK YOU !!