MINI PROJECT FOR MANAGEMENT SYSTEM IN C LANGUAGE

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PROGRAMMING

OUR PROJECT HAS BEEN CATAGORISED INTO THREE PARTS:

- ➢ **LIBRARY MANAGEMENT SYSTEM**
- ➢ **ATM BANKING SYSTEM**
- ➢ **RESTAURANT BILLING SYSTEM**

AIM

- Library management is a project that maintains and stores book data electronically according to students' needs. The system supports both students and library administrators to keep a consistent track of all the books available in the library.

- ATM banking enables customers to access their accounts without visiting the bank. When a user requires to withdraw cash, they can enter their PIN number and the amount to be withdrawn.

- A Restaurant Billing software eases billing operations by automation and improves the overall customer experience.

LIBRARY MANAGEMENT SYSTEM

Algorithm

Step 1: Declare a structure which holds data members

Step 2: declare variables which are used for loop

Step 3: use switch case to work on each module

Step 4: case 1- for Adding book information

       Case 2- for Display book information

       Case 3- for Display book of given Author

       Case 4- for Finding number for books in library

       Case 5- for EXIT

PROCEDURE

- ➢ First we will declare the variables.
- ➢ Printf() and scanf() functions for displaying the content and taking input from the user.
- ➢ For entering the choice we use while loop.
- ➢ Then we use switch case for entering user choice
- ➢ Program uses structure to store books records.
- ➢ In case 3 strcmp function is used to match author's name.

module

```c
void mainlibrary()
{
    struct library lib[100];

    char ar_nm[30], bk_nm[30];

    int i, input, count;

    i = input = count = 0;

    while (input != 5) {

        printf("\n\n*************"
            "WELCOME TO E-LIBRARY "
            "*************\n");
        printf("\n\n1. Add book infor"
            "mation\n2. Display "
            "book information\n");
```

```c
        printf("3. List all books of "
            "given author\n");
        printf(
            "4. List the count of book"
            "s in the library\n");
        printf("5. Exit");

        printf("\n\nEnter one of "
            "the above: ");
        scanf("%d", &input);

        switch (input) {

        case 1:

            printf("Enter Book Name = ");
            scanf("%s", lib[i].book_name);
```

```c
printf("Enter Author Name = ");
    scanf("%s", lib[i].author);

    printf("Enter Pages = ");
    scanf("%d", &lib[i].pages);

    printf("Enter Price = ");
    scanf("%f", &lib[i].price);
    count++;

    break;

    case 2:
    printf("You have entered"
        " the following "
        "information\n");
```

```c
for (i = 0; i < count; i++) {

        printf("book name = %s",
            lib[i].book_name);

        printf("\t author name =
%s",
            lib[i].author);

        printf("\t  pages = %d",
            lib[i].pages);

        printf("\t  price = %f",
            lib[i].price);
    }
    break;
    case 3:
    printf("Enter Author Name :
");
```

```
if (strcmp(ar_nm,
          lib[i].author)== 0)
   {
     printf("book name = %s",
       lib[i].book_name);

     printf("\t author name = %s",
        lib[i].author);

     printf("\t  pages = %d",
        lib[i].pages);

     printf("\t  price = %f",
        lib[i].price);
   }

   }
  break;
```

```
case 4:
    printf("\n No of books in "
        "library : %d",
        count);
    break;
case 5:
   printf("\nTHANKYOU FOR
USING E-LIBRARY:)");
   }
  }
}
```

ATM BANKING

ALGORITHM

Step 1: Declare variables and initialize with values.
Step 2: if the entered pin matches , use switch case to get following values
Step 3: case 1- for Withdrawal of money
        Case 2- for Depositing the money
        Case 3- to find the Balance money
        Default- to EXIT

PROCEDURE

➢ First we will declare the variables.

➢ Printf() function is used for displaying the current time in the console

➢ For entering the pin and to continue transaction, we use while loop.

➢ Then we use switch case for entering user choice

➢ The transaction can be carried out as many times by pressing 'y' and if not needed press 'n' and exit the loop.

module

```c
void mainbankingsystem()
{ int pin=1234 , option ,
enteredPin , count=0 , amount=1;
float  balance=5000;
int  continueTransaction=1;
time_t  now;
time(&now);
printf("\n");
printf ("\t\t\t\t\t %s",ctime(&now));
printf("\n\t\t\t
===================Welcome
to
ATM===================");
```

```c
while(pin != enteredPin){
printf("\nPlease enter your pin : ");
scanf("%d",&enteredPin);
if(enteredPin !=pin){
Beep(610,320);
printf("Invalid pin!!!"); }
count++;
if(count==3 && enteredPin!=pin){
return 0;
}} while(continueTransaction !=0)
{printf("\n\t\t\t===============
====*Available
Transactions================");
```

```c
printf("\n\n\t\t1.Withdrawal");

printf("\n\t\t2.Deposit");

printf("\n\t\t3.Check Balance");

printf("\n\n\tPlease select an option : ");

scanf("%d",&option);

switch(option){

case 1:  while(amount % 500 !=0){

printf("\n\t\tEnter the amount :");
scanf("%d",&amount);

if(amount % 500 !=0)

printf("\n\tThe amount must be multiples of 500"); }
```

```c
if(balance < amount){

printf("\n\t Sorry insufficient balance");
amount=1;

break; }

else{

balance -=amount;

printf("\n\t\tYou have withdrawn Rs.%d your new balance is Rs.%f",amount,balance);

amount=1;

break; }
```

```c
   case 2;
   printf("\n\t\t Please enter the amount : ");
   scanf("%d",&amount);
   balance+=amount;
   printf("\n\t\t You have deposited Rs.%d
       your new balance is Rs.%f",amount,balance);
   amount=1;
   break;
    case 3:
   printf("\n\t\t Your balance is
       Rs.%f",balance);
    break;

   default:
    Beep(610,320);
    printf("\n\t\t Invalid option!!");}
   printf("\n\n\t\t Do you wish to perform
       another Transaction? press 1[yes],0[no]");
   scanf("%d",&continueTransaction);
   }
   printf("\n\t\t Thank you for banking\n");
    }
```

RESTAURANT MANAGEMENT SYSTEM

ALGORITHM

Step 1: Declare variables and their values

Step 2: We used void printmeals and void ordermeals to print the menu and order.

Step 3: We used while loop for the following values

      1) Please enter your option

      2) Please enter your amount of order

      3) would you like to enter more orders.

PROCEDURE

➢ First we will declare the variables.
➢ Printf() and scanf() functions are used to display the menu and also take input from the user
➢ We used while loop for entering the choice
➢ We have entered the required calculations for the total bill and discounts respectively.
➢ After the final billing we can press y or n to continue or exit the loop respectively.

module

```c
#include<stdio.h>
#include<string.h>
#include<stdlib.h>

double price[7] = { 250 , 300 , 20 , 120 , 150 , 160 , 50 };
double mealTaxPrices[7];
int adultNumber,childNumber;

void printMeals();
void orderMeals();
double orderForAdult();
double orderForChildren();
int main()
{
    char response = 'y';
printMeals();
    while(response == 'y'|| response == 'Y')
    {
        printf("please enter number of adults  :");
        scanf("%d",&adultNumber);
        printf("please enter number of children:");
        scanf("%d",&childNumber);

        orderMeals();
```

```c
    printf("\nwould you like to continue(y/n):");
        scanf("\n%c",&response);
    }
 printf("\n    ******************* THANK YOU FOR COMING
**************************\n");
 printf("\20******************* PLEASE VISIT US NEXT TIME
**************************\20 \n");
system("pause");
  return 0;
}
void printMeals()
{
 printf("\20******************* WELCOME TO ABC RESTURANT
**************************\20\n");
    printf(" \t\t\t Below is the menue:\20\n");
    printf(" \t\t\t MEALS\t\t\tPRICE:\n");
    printf(" \t\t\t \22*****************************\22\n");
    printf(" \t\t\t 1- Veg Biryani\t\t250/-\n");
    printf(" \t\t\t 2- Special Meal\t300/-\n");
    printf(" \t\t\t 3- Roti\t\t20/-\n");
    printf(" \t\t\t 4- Dal\t\t\t120/-\n");
    printf(" \t\t\t 5- Paneer Tikka\t150/-\n");
    printf(" \t\t\t 6- Veg mix\t\t160/-\n");
    printf(" \t\t\t 7- Icecream\t\t50/-\n")
printf("\n");
```

```c
}
void orderMeals()

{

        double totalPriceForAdult, totalPriceForChildren;

        double allPayment,discount;

        printf("                \t\t**** ORDER MENUE****\n");


    totalPriceForAdult =  orderForAdult();

    totalPriceForChildren = orderForChildren();

    allPayment = totalPriceForAdult + totalPriceForChildren ;
   printf("\n \t\t    \22**************************************\22   \n");
    printf(" \t\t   ****************** final BILL  ************     \n");
    printf(" \t\t\tadult/child\tcount\t\ttotal price\n");
    printf(" \t\t\tadults\t\t%d\t\t%5.2f\n",adultNumber,totalPriceForAdult);
    printf(" \t\t\tchildren\t%d\t\t%5.2f\n",childNumber,totalPriceForChildren);
    printf(" \t\t\tTotal bill\t\t%5.2f\n",allPayment );

    if(allPayment < 100)
                discount=((allPayment * 0.5)/100);
    else if(allPayment>= 100 && allPayment<200)
        discount=((allPayment * 1)/100);
    else if(allPayment>= 200 && allPayment<300)
        discount=((allPayment * 1.5)/100);
    else if(allPayment>= 300 && allPayment<400)
                discount=((allPayment * 2.0)/100);
        else
                discount= ((allPayment * 4.0)/100);
printf(" \t\t\tTotal bill after discount\t%5.2f\n",allPayment-discount);}
double orderForAdult()

{

    int menuOption,i,amount;

    char response = 'y';

    double totalPerPerson = 0.0,totalAllPerson = 0.0;

    double tax = 5.0;

    if(adultNumber <=0)
                printf("\n ");
        else
    printf("*\tadults:\n");
    for(i=0;i<adultNumber;i++)

    {
        printf("adult %d please enter your orders\n",i+1);
        while(response == 'y' || response == 'Y')
        {
                printf("please enter your option:");
                scanf("%d",&menuOption);
            if(menuOption<1 || menuOption>7)
            {
             printf("sorry we don`t have this order \nagain")
```

```c
 continue;
                printf("please enter your amount of order:");
                scanf("%d",&amount);
                totalPerPerson = totalPerPerson + (amount *
price[menuOption ]);
                printf("\nWould you like to enter more orders(y/n):");
                scanf("\n%c",&response);}
        printf("\n");
        totalAllPerson += totalAllPerson +  totalPerPerson;
        totalPerPerson = 0.0;
        response = 'y';
    }
 return totalAllPerson + ((totalAllPerson * tax) / 100);
}
double orderForChildren()
{
    int menuOption,i,amount;
    char response = 'y';
    double totalPerChild = 0.0,totalAllChildren = 0.0;
    double tax = 5.0,oneOrder;
     if(childNumber <=0)
                printf("\n");
        else
    printf("*\tChildren:\n");
    for(i=0;i<childNumber;i++)
```

```c
    {
        printf("child %d please enter your orders\n",i+1);
        while(response == 'y' || response == 'Y')
        {
                printf("please enter your option:");
                scanf("%d",&menuOption);
           if(menuOption<1 || menuOption>7){
            printf("sorry we don`t have this order \nagain! ");
                continue;
            printf("please enter your amount of order:");
                scanf("%d",&amount);
oneOrder = (price[menuOption - 1] * 60)/100 ;
    //this one order for a child with discount   %60 of one order of adult
                totalPerChild = totalPerChild + (amount * oneOrder)  ;
            printf("Would you like to enter more orders(y/n):");
                scanf("\n%c",&response);
    }
        totalAllChildren += totalAllChildren +  totalPerChild;
        response = 'y';
        totalPerChild = 0.0;
printf("\n");}

    return totalAllChildren + ((totalAllChildren * tax) / 100);
}
```

Advantages

- ➢ The data should be stored in computer rather than in register manually.
- ➢ Better planning and build an application program to reduce the manual work for managing the tasks.
- ➢ It has faster access to the stored data.
- ➢ Userfriendly.
- ➢ Time saving.

Link for whole code:

https://github.com/Shriyaa04/MINI-PROJECT/blob/main/main.c

```
*************WELCOME TO E-LIBRARY *************


1. Add book information
2. Display book information
3. List all books of given author
4. List the count of books in the library
5. Exit

Enter one of the above: 2
You have entered the following information
book name = Harrypotter   author name = J.k          pages = 345       price = 1024.500000

*************WELCOME TO E-LIBRARY *************


1. Add book information
2. Display book information
3. List all books of given author
4. List the count of books in the library
5. Exit

Enter one of the above: 3
Enter Author Name : J.k
book name = Harrypotter   author name = J.k          pages = 345       price = 1024.500000
```

```
*************WELCOME TO E-LIBRARY *************


1. Add book information
2. Display book information
3. List all books of given author
4. List the count of books in the library
5. Exit

Enter one of the above: 4

 No of books in library : 1

*************WELCOME TO E-LIBRARY *************


1. Add book information
2. Display book information
3. List all books of given author
4. List the count of books in the library
5. Exit

Enter one of the above: 5

THANKYOU FOR USING E-LIBRARY:)
WOULD YOU LIKE TO GO BACK TO MENU(y/n)?
y
PRESS 1 FOR LIBRARY MANAGEMENT SYSTEM
PRESS 2 FOR ATM BANKING
```

```
THANKYOU FOR USING E-LIBRARY:)
WOULD YOU LIKE TO GO BACK TO MENU(y/n)?
y
PRESS 1 FOR LIBRARY MANAGEMENT SYSTEM
PRESS 2 FOR ATM BANKING
PRESS 3 FOR RESTURANT BILLING
2


                            Sun Jan 23 16:59:27 2022


                ======================Welcome to ATM======================
Please enter your pin : 1234


                ===================*Available Transactions================


        1.Withdrawal
        2.Deposit
        3.Check Balance

    Please select an option : 1

        Enter the amount :1000

        You have withdrawn Rs.1000  your new balance is Rs.4000.000000

         Do you wish to perform another Transaction? press 1[yes],0[no]
```

```
        2.Deposit
        3.Check Balance

Please select an option : 3

        Your balance is Rs.6000.000000

        Do you wish to perform another Transaction? press 1[yes],0[no]1

                ===================*Available Transactions================

        1.Withdrawal
        2.Deposit
        3.Check Balance

Please select an option : 4

        Invalid option!!

        Do you wish to perform another Transaction? press 1[yes],0[no]0

                Thank you for banking
```

```
Hello! WELCOME TO OUR MINI PROJECT
PRESS 1 FOR LIBRARY MANAGEMENT SYSTEM
PRESS 2 FOR ATM BANKING
PRESS 3 FOR RESTURANT BILLING
3
►*******************     WELCOME TO SRM RESTURANT **************************►
                       Below is the menue:►
                       MEALS                    PRICE:
                       ↕********************************↕
                       1- Veg Biryani           250/-
                       2- Special Meal          300/-
                       3- Roti                  20/-
                       4- Dal                   120/-
                       5- Paneer Tikka          150/-
                       6- Veg mix               160/-
                       7- Icecream              50/-

please enter number of adults  :2
please enter number of children:1
                          **** ORDER MENUE****

*       adults:
adult 1 please enter your orders
please enter your option:1
please enter your amount of order:1

Would you like to enter more orders(y/n):n

adult 2 please enter your orders
please enter your option:3
please enter your amount of order:2

Would you like to enter more orders(y/n):y
please enter your option:4
please enter your amount of order:1

Would you like to enter more orders(y/n):n
```