Report on Mini Project-3

Group-6; Section-11

**Submitted by:**

Tasnuva Tasnim Nova (2022-1-60-266)

Abdul Mumeet Pathan (2022-1-60-267)

Muntasir Mahmud (2022-1-60-269)

**Topic:**

University semester fee payment system

**Submitted to:**

Touhid Ahmed

Lecturer, Department of The programme Science & Engineering, East West University

**Declaration**

We, hereby declare that the work demonstrated in this assessment has been done by us and it represents our own work.

Name of team members:

1. Tasnuva Tasnim Nova
2. Abdul Mumeet Pathan
3. Muntasir Mahmud

**Contents:**

1. Acknowledgement
2. Preface
3. Definition of a payment slip
4. Logic & Work flow of code
5. Program
6. Conclusion
7. Reference

**Acknowledgements**

We would like to thank Touhid Ahmed (Lecturer) who inspired us and provided us with sufficient amount of background knowledge and understanding on this subject.

We owe a very special thanks to our course instructor, Dr. Mohammed Abu Yousuf, for providing us with necessary information and resources such as lecture sheets which helped us to complete this project successfully.

We feel privileged to extend our gratitude to our parents for their support and encouragement.

Page 01

**Preface**

The report is an introduction to the university semester fee payment system in c programming. Anybody, who does not even know the basics of doing the codes of advising or payment slip, will certainly be able to understand and gain knowledge from this report. The core theme of this report focuses on the processing of payment slips in C language.

This report also contains the steps of making a university semester fee payment slip which serves a good idea on how to program this type of payment slips.

Most of the idea for making this programme has been taken from the portal of East West University, books like “Teach Yourself C” by Herbert Schildt and Google.

Page 02

**Definition of a payment slip**

A university semester fee payment system or payment slip is basically a small paper form which a student includes while depositing money for semester fee. A payment slip mostly consists of the name of the student, student id, total amount of money to be deposited and name of the suggested banks where the money can be paid. The details in a payment slip must be filled up before submission for a successful transaction. The payment slip serves as a proof that the bank and the university acknowledges receiving money from the student. Payment slips provide security to the bank, the university and the student. For the student and the university, it is an evidence of payment and also works as a receipt. On the other hand, it works as a record of deposited funds on a daily basis for the bank. This also works as a future reference if any kind of confusion occurs.

Page 03

**Logic & Work flow of code:**

The highest priority of this codes are:

1. To make the process as easy as possible for the user.
2. If there is any invalid input, detect the invalid input and allow user to correct that.

The programme starts from main function, firstly it would ask the user to enter his Name and Student ID. After entering name, the programme would activate calID function.

In callID function, user got to input a student ID of 13 characters. After user enters all characters, the programme will check if all conditions are true. If not, the user will be asked to enter student ID again. Now, if user inputs 4 characters, the programme would check for 5th character which is a hyphen (“-“). If hyphen is entered as 5th character, the code will continue and look for other true conditions. If hyphen does not exist anywhere, which means input is not equal to 13 characters or input consists of other character except hyphen. For student ID, hyphens are the 5th, 7th and 10th character. So, the programme would check for hyphen 3times. If all conditions are true, the code will continue and go into next stage. Similarly the code will check if the user has input any other charaterters except numbers such as alphabets or any other special characters then it will warn the user saying “YOUR ID NO. IS INVALID”. And it will ask to “ TRY AGAIN’’. So until the user inputs a valid ID the code wont proceed.

Next after a valid input id the code will call CALL\_FUNC1.

In callfunc\_1 function, the programme would open a file which already exists in memory and print it on monitor. So that user can read from it, choose their own courses, check course details, credits and time.

In callIDfunc\_2 function, the programme will ask the user to enter the course numbers which they want to take. We have used a switch case statement which will check if given conditions are true. After taking three courses, the programme would ask user if they want a 4th course or not. If no, the programme will calculate and sum up the credits which are already fixed. For Yes, they will have to enter 1. If yes, the programme would ask user to choose a course for 4th course. After taking the 4th course, the programme would calculate and sum up the credits. But sum of credits can not be less than 9 and greater than 15. To check this condition, the programme will go the main function. If this condition is not fulfilled the user would be redirected to the beginning of callIDfunc\_2 function and asked to revise courses. This process will continue until conditions are true. If all condition are true, the code will proceed to the next stage.  
Besides these, the code is successful to check and detect down the invalid inputs and ask the user to correct them. If everything goes fine then the code will call\_func3.

Call\_func3 is basically a function which calculates the tuition fees of the courses taken by the user and prints the final payment slip. Here we have used another switch case statement. As the tuition per credit is 5000,fixed. For courses 1 to 10, tuition fee will multiplied by 3 as it is 3 credits for every course from 1 to 10. Similarly, it is the same case in next two conditions. For 11 to 14, it will be multiplied by 4 and for 15 to 18, it will be multiplied by 4.5. After calculating and summing up, the code will proceed to the next stage.

After all calculation, the programme would proceed to time() function which is used to get current system time as structure in code. Then it would print the actual payment slip on the monitor. This payment slip would consist of number of user chosen courses, respective sections and credits for each course, time and weekdays schedule of each course and tuition fees of courses chosen by the user. An additional cost for all the preferred courses, which is 10000, will be added tuition fee. That would be the grand total amount of money to be paid for all courses.

This payment slip would also contain last date of payment as well as name of the suggested banks and account number where the payment can be deposited. There is also a section of which would suggest mode of payment. The blank spaces mean that user would have to fill those up before deposit.

Even if we do not create a file for course details, we would have had to write several printfs for each line which would have been troublesome for us and the user. By creating a file, we have basically saved some effort for us, user and the program itself.

**Program:**

#include<stdio.h>

#include <stdlib.h>

#include<math.h>

#include<time.h>

void call\_func1(void);

void call\_func2(void);

void call\_func3(void);

void callID(void);

char ch;

int m,i,n,a,sum=0;

int add4;

int arr[4];

char id[20];

int len;

int decision;

int revise\_course;

double tution\_fee=0;

double grand\_total=0;

char name[30];

//------------------------Main function--------------------------

int main ()

{

int ID;

printf("\n \t \t \t \t \t \t \t WELCOME TO EAST WEST UNIVERSITY \n");

printf("Enter your Name: ");

gets(name);

callID();

call\_func1();

call\_func2();

if (sum>=9 && sum<=15)

printf("\t\t\t\tYou are ready to proceed........\n\n\n");

else

{

printf("\t\tYour have taken %d credit that does not follow the credit rule system.SORRY!\n",sum);

printf("\t\tYou have to revise your course.Would you like to do that again?\n\t\tIf Yes,Press 1\n\t\tIf No, Press 2\n\t\tYour Input:");

scanf("%d",&revise\_course);

if(revise\_course==1)

{

call\_func2();

}

else

{printf("\t\tInvalid Input.Would you like to do that again?\n\t\tIf Yes,Press 1\n\t\tIf No, Press any key to exit\n\t\tYour Input:");

scanf("%d",&revise\_course);

if(revise\_course==1)

{

call\_func2();

}

else

exit(1);

}

}

call\_func3();

printf("Press any key to close the application");

getch();

return 0;

}

//------------------------call function one--------------------------

void call\_func1(void)

{

FILE \*ptvar;

ptvar=fopen("text1.txt","r");

if (ptvar==NULL)

{

printf("error");

exit (1);

}

while ((ch=fgetc(ptvar)) !=EOF)

printf("%c",ch);

fclose(ptvar);

printf("\n");

}

//------------------------call function two--------------------------

void call\_func2(void)

{

printf("\t\tEnter the Course no. you want to take:\n");

for (i=1;i<=3;i++)

{

tryy:

fflush(stdin);

printf("\t\tCourse No %d is ",i);

scanf("%d",&m);

switch (m)

{

case 1 ... 10:

sum=sum+3;

break;

case 11 ... 14:

sum=sum+4;

break;

case 15 ... 18:

sum=sum+4.5;

break;

default:

{

printf("\t\tInvalid Input. Try Again\n");

goto tryy;

}

}

arr[(i-1)]=m;

if(i==3)

{

tryy2:

fflush(stdin);

printf("\t\tDo you want to add one more course?\n\t\tIf Yes,Press 1\n\t\tIf No, Press 2\n\t\tYour Input: ");

scanf("%d",&decision);

if(decision==1)

{

printf("\t\tWhich Course you would like to add?\n\t\tCourse No. ");

scanf("%d",&add4);

arr[3]=add4;

switch (add4)

{

case 1 ... 10:

sum=sum+3;

break;

case 11 ... 14:

sum=sum+4;

break;

case 15 ... 18:

sum=sum+4.5;

break;

default:

printf("\t\tInvalid Input\n");

goto tryy2;

} //switch

}//if

else

{break;}

}

}//for

}//func

//------------------------call function three--------------------------

void call\_func3()

{

for(i=0;i<4;i++)

{

n=arr[i];

switch (n)

{

case 1 ... 10:

tution\_fee=tution\_fee+3\*5000;

break;

case 11 ... 14:

tution\_fee=tution\_fee+4\*5000;

break;

case 15 ... 18:

tution\_fee=tution\_fee+4.5\*5000;

break;}

}

//advising slip are\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

time\_t t;

time(&t);

printf("\n \t \t \t \t \t \t \t East West University \n");

printf("\t \t \t \t A/2,Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212 \n");

printf("\t \t \t \t \t Tel: 09666775577 (Hunting), Ext-224,364,365 \n");

printf(" \t \t \t \t \t \t \t Advising / Deposit Slip \n");

printf(" \t \t \t \t \t \t \t ----------------------- \n");

printf("\n");

printf("%s", ctime(&t));

printf("STUDENT ID# ");

puts(id);

printf(" \t \t \t \t \t \t Name:");

puts(name);

printf(" \t \t \t \t \t \t \t \t \t \t \tSummer-2022 \n" );

printf("\n");

printf(" \t Course (s) Advised By: ");

printf(" \t \t \t Sign): .......................................\n" );

printf("\n \t \t Selected Course \t Section \t Credit \t class room \t Tuition Fee \t Time-WeekDay ");

printf("\n \n \t \t -----------------------------------------------------------------------------------------------------------");

printf("\n");

for (i=0;i<4;i++)

{

a=arr[i];

switch (a)

{case 1:

printf("\n \t \t ENG 101 \t \t 3 \t \t 3.0 \t ab1 \t \t 15000 \t \t TR 3.10pm-4.20pm");

break;

case 2:

printf("\n \t \t ENG 102 \t \t 3 \t \t 3.0 \t ab3 \t \t 15000 \t \t MW 8.10am-9.20am ");;

break;

case 3:

printf("\n \t \t CSE 106 \t \t 3 \t \t 3.0 \t ab1 \t \t 15000 \t \t Tr 3.10pm-4.20pm ");

break;

case 4:

printf("\n \t \t ACT 101 \t \t 3 \t \t 3.0 \t ab2 \t \t 15000 \t \t MW 1.30pm-3.20pm ");

break;

case 5:

printf("\n \t \t GEN 201 \t \t 3 \t \t 3.0 \t 312 \t \t 15000 \t \t ST 3.10pm-4.20pm ");

break;

case 6:

printf("\n \t \t PHY 209 \t \t 3 \t \t 3.0 \t ab1 \t \t 15000 \t \t TR 10.10am-12.20pm ");

break;

case 7:

printf("\n \t \t MAT 101 \t \t 3 \t \t 3.0 \t ab3 \t \t 15000 \t \t SR 3.10pm-4.20pm ");

break;

case 8:

printf("\n \t \t MAT 102 \t \t 3 \t \t 3.0 \t ab2 \t \t 15000 \t \t TR 9.10am-10.20am ");

break;

case 9:

printf("\n \t \t MAT 104 \t \t 3 \t \t 3.0 \t 105 \t \t 15000 \t \t ST 11.10am-12.20pm ");

break;

case 10:

printf("\n \t \t STA 102 \t \t 3 \t \t 3.0 \t 205 \t \t 15000 \t \t MW 2.10pm-3.20pm ");

break;

case 11:

printf("\n \t \t CSE 209 \t \t 3 \t \t 4.0 \t ab1 \t \t 20000 \t \t TR 1.30pm-3.20pm ");

break;

case 12:

printf("\n \t \t CHE 109 \t \t 3 \t \t 4.0 \t ab2 \t \t 20000 \t \t TR 8.10am-10.20am ");

break;

case 13:

printf("\n \t \t PHY 109 \t \t 3 \t \t 4.0 \t ab3 \t \t 20000 \t \t MW 12.10pm-2.20pm ");

break;

case 14:

printf("\n \t \t CSE 207 \t \t 3 \t \t 4.0 \t 315 \t \t 20000 \t \t MW 3.10pm-4.20pm ");

break;

case 15:

printf("\n \t \t CSE 103 \t \t 3 \t \t 4.5 \t ab1 \t \t 22500 \t \t SR 9.10am-11.20am ");

break;

case 16:

printf("\n \t \t CSE 326 \t \t 3 \t \t 4.5 \t ab2 \t \t 22500 \t \t TR 1.30pm-3.20pm ");

break;

case 17:

printf("\n \t \t CSE 302 \t \t 3 \t \t 4.5 \t ab1 \t \t 22500 \t \t MW 3.10pm-4.20pm ");

break;

case 18:

printf("\n \t \t CSE 110 \t \t 3 \t \t 4.5 \t ab3 \t \t 22500 \t \t TR 10.10am-12.30pm ");

break;

}

}

printf("\n \n \t \t -----------------------------------------------------------------------------------------------------------");

printf("\n \n \t \t ----------------------------------------------------------------------");

printf("\n");

printf("\n");

printf("\n");

printf("\n \t \t Tuition Fee:\t \t \t \t \t \t %.2lf",tution\_fee);

printf("\n");

printf("\n");

printf("\t \t Additional Cost: \t \t \t \t \t 10,000");

printf("\n");

grand\_total=tution\_fee+10000;

printf("\n\t \t Grand Total \t \t \t \t \t \t %.2lf", grand\_total);

printf("\n");

printf("\n \t \t Last date of payment:\t\t15/06/22 \n");

printf("\n");

printf("\n \t \t Payable Banks \n");

printf("\n");

printf(" \t \t a) Bank Asia Ltd. (Any Branch) \n");

printf("\t \t \t A/C # 03936000120 \n");

printf(" \t \t b) United Commercial Bank Ltd. (Any Branch)\n");

printf("\t \t \t A/C # 1131101000000381 \n");

printf(" \t \t c) One Bank Ltd. (Any Branch)\n");

printf("\t \t \t A/C # 1131101000000381 \n");

printf(" \t \t d) One Bank Ltd. (Any Branch)\n");

printf("\t \t \t A/C # 1131101000000381 \n");

printf(" \t \t e) One Bank Ltd. (Any Branch)\n");

printf("\t \t \t A/C # 1131101000000381 \n");

printf("\n \t \t Mode of Payment: Cash/PO/DD No: ...................................Date...........................Bank................................................\n");

printf("\n \t \t Student's Signature: .....................................Authorized Signature (By Bank): ............................................................ \n");

}

void callID(void)

{

again:

fflush(stdin);

printf("Enter Student ID: ");

gets(id);

len=strlen(id);

if(len>13){

printf("Your ID no is invalid! Please input correct ID no.\n\n");

goto again;}

for(i=0; i<13 ; i++)

{

if(i==4 || i==6 || i==9)

{

if(id[i]=='-')

{

continue;

}

else

{

printf("Your ID no is invalid! Please input correct ID no.\n\n");

goto again;

}

}

else

{

if(id[i]=='1' || id[i]=='2' || id[i]=='3' || id[i]=='4' || id[i]=='5' || id[i]=='6' || id[i]=='7' || id[i]=='8' || id[i]=='9' || id[i]=='0')

{

continue;

}

else

{

printf("Your ID no is invalid! Please input correct ID no.\n\n");

goto again;

}

}

}

printf("\nYour ID is valid!\n");

}

**Conclusion**

We successfully made a university semester fee payment system or payment slip with the help of C programming.

**Reference:**

1. “Teach Yourself C” by Herbert Schildt
2. Different Lecture Notes provided by our teachers.
3. East West University Portal.
4. Google.