# Assignment-10

**Q1. Enter the marks of 5 students in Chemistry, Mathematics and**

**Physics (each out of 100) using a structure named Marks having**

**elements roll no., name, chem\_marks, maths\_marks and phy\_marks**

**and then display the percentage of each student.**

#include <stdio.h>

struct Marks {

int roll\_no;

char name[30];

float chem\_marks, maths\_marks, phy\_marks;

};

int main() {

struct Marks marks[5];

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

printf("Student %d\n",i+1);

printf("Enter roll no. :");

scanf("%d", &marks[i].roll\_no);

printf("Enter name :");

scanf("%s",marks[i].name);

printf("Enter Chemistry marks :");

scanf("%f", &marks[i].chem\_marks);

printf("Enter Maths marks :");

scanf("%f",&marks[i].maths\_marks);

printf("Enter Physics marks :");

scanf("%f", &marks[i].phy\_marks);

}

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

printf("Student %d\n",i+1);

float percentage = (marks[i].chem\_marks + marks[i].maths\_marks +

marks[i].phy\_marks)/300.0\*100;

printf("Percentage : %f\n", percentage);

}

return 0;

}

Output-

Student 1

Enter roll no. :1

Enter name :dhw

Enter Chemistry marks :12

Enter Maths marks :34

Enter Physics marks :45

Student 2

Enter roll no. :2

Enter name :delhe

Enter Chemistry marks :45

Enter Maths marks :65

Enter Physics marks :67

Student 3

Enter roll no. :4

Enter name :djsghdbvkj

Enter Chemistry marks :78

Enter Maths marks :67

Enter Physics marks :65

Student 4

Enter roll no. :3

Enter name :89 dgwv

Enter Chemistry marks :90

Enter Maths marks :98

Enter Physics marks :73

Student 1

Percentage : 30.333334

Student 2

Percentage : 59.000000

Student 3

Percentage : 70.000000

Student 4

Percentage : 87.000000

**Q3. Write a structure to store the name, account number and**

**balance of customers (more than 10) and store their information. -**

**print the names of all the customers having balance less than $200. -**

**add $100 in the balance of all the customers having more than $1000**

**in their balance and then print the incremented value of their**

**balance.**

#include<stdio.h>

void main()

{

struct bank

{

int acc\_no;

char name[20];

int bal;

}b[5];

int i;

for(i=0;i<5;i++)

{

printf("\n\n enter the acc\_no,name,balance\n\n");

printf("\nenter the account no\n");

scanf("%d",&b[i].acc\_no);

printf("\n enter the name\n");

scanf("%s",b[i].name);

printf("\n enter the balance\n");

scanf("%d",&b[i].bal);

}

for(i=0;i<5;i++)

{

if(b[i].bal<200)

{

printf("\n\n The acc\_no,name,balance below RS:-200\n\n");

printf("\n the account no:-%d\n",b[i].acc\_no);

printf("\n the name:-%s\n",b[i].name);

printf("\n the balance:-%d\n",b[i].bal);

}

}

}

Output-

enter the acc\_no,name,balance

enter the account no

123456

enter the name

wwedfgb

enter the balance

765

enter the acc\_no,name,balance

enter the account no

987654

enter the name

ertyujn

enter the balance

100

enter the acc\_no,name,balance

enter the account no

34567

enter the name

ertyujn

enter the balance

9876

enter the acc\_no,name,balance

enter the account no

456543

enter the name

rthhd

enter the balance

200

enter the acc\_no,name,balance

enter the account no

456789

enter the name

ertyuijhb

enter the balance

150

The acc\_no,name,balance below RS:-200

the account no:-987654

the name:-ertyujn

the balance:-100

The acc\_no,name,balance below RS:-200

the account no:-456789

the name:-ertyui

the balance:-150

**Q5. Let us work on the menu of a library. Create a structure containing book information like accession number, name of author, book title and flag to know whether book is issued or not. Create a menu in which the following can be done. 1 - Display book information 2 - Add a new book 3 - Display all the books in the library of a particular author 4 - Display the number of books of a particular title 5 - Display the total number of books in the library 6 - Issue a book (If we issue a book, then its number gets decreased by 1 and if we add a book, its number gets increased by 1)**

#include<stdio.h>

#include<string.h>

void add();

void display();

void author();

void title();

void count();

void access();

struct book

{

int a;

char name[30],title[30],flag[6];

float price;

}b[100];

int d;

void main()

{

int i,n,c;

printf("Enter number of book\n");

scanf("%d",&n);

for(i=0;i<n;i++){

printf("Enter information of book no. %d\n",i+1);

printf("Accession number");

scanf("%d",&b[i].a);

printf("Name of author");

scanf("%s",b[i].name);

printf("Title of book");

scanf("%s",b[i].title);

printf("Price");

scanf("%f",&b[i].price);

printf("Issue status yes/no:");

scanf("%s",b[i].flag);

}

d=i;

printf("\*\*\*\*menu\*\*\*\*\*");

printf("\n1. Add book information\n2. Display book information\n3.List all books of given author\n4. list the title of specified book\n5.List the count of books in the library\n6. List the books in the orderof accession number\n 7.Exit\n");

printf("Choose an option\n");

scanf("%d",&c);

while(c!=7){

if(c==1)

add();

if(c==2)

display();

if(c==3) author();

if(c==4) title();

if(c==5) count();

if(c==6) access();

if(c!=1 && c!=2 && c!=3 && c!=4 && c!=5 && c!=6)

printf("Invalid Input\nPlease enter valid input\n");

printf("1. Add book information\n2. Display book information\n3.List all books of given author\n4. list the title of specified book\n5.List the count of books in the library\n6. List the books in the orderof accession number\n 7.Exit\n");

printf("Choose an option\n");

scanf("%d",&c);

}

}

void add(){

int i,n;

printf("Enter number of book added\n");

scanf("%d",&n);

for(i=d;i<n+d;i++){

printf("Enter information of additional book no. %d\n",i-d+1);

printf("Accession number ");

scanf("%d",&b[i].a);

printf(" Name of author");

scanf("%s",b[i].name);

printf("Title of book ");

scanf("%s",b[i].title);

printf("Price");

scanf("%f",&b[i].price);

printf("Issue status yes/no:");

scanf("%s",b[i].flag);

}

d=d+n;

}

void display(){

printf("Accession number Name title price issue status\n");

for(int j=0;j<d;j++)

printf("%d %s %s %f%s\n",b[j].a,b[j].name,b[j].title,b[j].price,b[j].flag);

}

void author()

{

char A[30],j,c;

printf("Enter author name ");

scanf("%s",A);

printf("Accession number Name title price issue status\n");

for(int j=0;j<d;j++){

c=strcmp(A,b[j].name);

if(c==0)

printf("%d %s %s %f %s\n",b[j].a,b[j].name,b[j].title,b[j].price,b[j].flag);

}

}

void title()

{

char t[30];

int c,i,j;

printf("Enter Title of a book");

scanf("%s",t);

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

{

c=strcmp(t,b[i].title);

if(c==0){

printf("Accession number Name title price issue status\n");

printf("%d %s %s %f%s\n",b[i].a,b[i].name,b[i].title,b[i].price,b[i].flag);

}

}

}

void count()

{

printf("no. of books in libarary is %d\n",d);

}

void access()

{

int i,j,E[100],c[100],a;

for(i=0;i<d;i++){

E[i]=b[i].a;

c[i]=i;

}

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

for(j=i;j<d;j++)

if(E[i]>E[j]){

a=E[i];

E[i]=E[j];

E[j]=a;

a=c[i];

c[i]=c[j];

c[j]=a;

}

printf("Accession number Name title price issue status\n");

for(j=0;j<d;j++)

printf("%d %s %s %f %s\n",b[c[j]].a,b[c[j]].name,b[c[j]].title,b[c[j]].price,b[c[j]].flag);

}

output-

Enter number of book

2

Enter information of book no. 1

Accession number23

Name of authorasdfg

Title of booksewc cret

Price123

Issue status yes/no:yes

Enter information of book no. 2

Accession number34

Name of authorasdfg

Title of bookgarden

Price345

Issue status yes/no:no

\*\*\*\*menu\*\*\*\*\*

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

1

Enter number of book added

1

Enter information of additional book no. 1

Accession number 45

Name of authorqwert

Title of book mocking

Price7654

Issue status yes/no:yes

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

2

Accession number Name title price issue status

23 asdfg secret 123.000000yes

34 asdfg garden 345.000000no

45 qwert mocking 765.000000yes

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

3

Enter author name asdfg

Accession number Name title price issue status

23 asdfg secret 123.000000 yes

34 asdfg garden 345.000000 no

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

4

Enter Title of a bookgarden

Accession number Name title price issue status

34 asdfg garden 345.000000no

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

5

no. of books in libarary is 3

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

6

Accession number Name title price issue status

23 asdfg secret 123.000000 yes

34 asdfg garden 345.000000 no

45 qwert mocking 765.000000 yes

1. Add book information

2. Display book information

3.List all books of given author

4. list the title of specified book

5.List the count of books in the library

6. List the books in the orderof accession number

7.Exit

Choose an option

7