Module 2

1.

#include<stdio.h>

#include<math.h>

main ()

{

float a,b,c,d,e,f,g;

printf("Enter the a,b,c from equation ax^2+bx+c=0 :");

scanf("%f%f%f",&a,&b,&c);

if(a!=0)

{

d=b\*b-4\*a\*c;

g=fabs(d);

e=-b/(2\*a);

f=sqrt(g)/(2\*a);

if(d==0)

{

printf("\nThe roots of equation are x=%3.2f and x=%3.2f .",e,e);

}

else if(d>0)

{

printf("\nThe roots of equation are x=%3.2f and x=%3.2f .",e+f,e-f);

}

else

{

printf("\nThe roots of equation are x=%3.2f+i%3.2f and x=%3.2f-i%3.2f .",e,f,e,f);

}

}

else

{

printf("\nThe equation is not a quadratic.");

}

}

2.

#include<stdio.h>

main ()

{

float a;

printf("Enter the age of person :");

scanf("%f",&a);

a<18 ? printf("The person is minor") : printf("The person is adult");

}

3.

#include<stdio.h>

main ()

{

int n;

float a;

printf("Enter the no of days the book is returned late:");

scanf("%d",&n);

if(n==0)

{

printf("\nNo fine.");

}

else if(n<0)

{

printf("\nInvalid input.");

}

else if(n<=5)

{

printf("\nThe fine is %d.",n);

}

else if(n<=15)

{

a=5+2\*(n-5);

printf("\nThe fine is %3.2f.",a);

}

else if(n<=20)

{

a=25+5\*(n-15);

printf("\nThe fine is %3.2f.",a);

}

else if(n<=30)

{

a=50+10\*(n-20);

printf("\nThe fine is %3.2f.",a);

}

else

{

printf("\nMembership cancelled.");

}

}

4.

#include<stdio.h>

main ()

{

float a,b,c;

char ch;

printf("Enter the equation :");

scanf("%f%c%f",&a,&ch,&b);

switch(ch)

{

case '+':

c=a+b;

printf("a+b=%3.2f",c);

break;

case '-':

c=a-b;

printf("a-b=%3.2f",c);

break;

case '\*':

c=a\*b;

printf("a\*b=%3.2f",c);

break;

case '/':

c=a/b;

printf("a/b=%3.2f",c);

break;

default:

printf("Invalid equation");

}

}

#include<stdio.h>

main ()

{

int n,a,b,sum,c;

printf("Enter the no:");

scanf("%d",n);

c=n;

sum=0;

do

{

a=n%10;

b=a\*a\*a;

sum=sum+b;

n=n/10;

}

while(n>=0);

if(c==sum)

{

printf("%d is armstrong no.",c);

}

else

{

printf("%d is not an armstrong no.",c);

}

}