**Day 2 – (if-else & if-else-if ladder)**

**Assignment 6**

**Input a number and find its absolute value**

***Program code***:

#include<stdio.h>

void main()

{

int num;

printf("Enter a number: ");

scanf("%d",&num);

if(num<0)

{

num=(-num);

printf("The absolute value of the number is: %d",num);

}

else

printf("The absolute value of the number is: %d",num);

}

***Output:***

Enter a number: 9

The absolute value of the number is: 9

Enter a number: -9

The absolute value of the number is: 9

**Assignment No. 7**

**Input a number and change its case (lowercase to upper case and vice versa)**

***Program code:***

#include<stdio.h>

void main()

{

char ch;

printf("Enter a charecter: ");

scanf("%c",&ch);

if(ch>=97&&ch<=122)

{

ch=ch-32;

printf("Character after convertion is: %c",ch);

}

else if(ch>=65&&ch<=90)

{

ch=ch+32;

printf("Character after convertion is: %c",ch);

}

else if(ch>=48&&ch<=57)

printf("It is a number");

else

printf("It is a special character");

}

***Output:***

Enter a charecter: a

Character after convertion is: A

Enter a charecter: A

Character after convertion is: a

**Assignment No. 8**

**Check whether a given number is an even or odd**

***Program code:***

#include<stdio.h>

void main()

{

int num,rem;

printf("Enter a number: ");

scanf("%d",&num);

rem=num%2;

if(rem==0)

printf("\nThis is an even number\n");

else

printf("\nThis is an odd number\n");

}

***Output:***

Enter a number: 8

This is an even number

Enter a number: 3

This is an odd number

**Assignment No. 9**

**Find the largest and smallest number among three numbers supplied by the user**

***Program code:***

#include<stdio.h>

void main()

{

int num1,num2,num3;

printf("Enter three numbers:\n");

scanf("%d%d%d",&num1,&num2,&num3);

if(num1>num2)

if(num1>num3)

{

printf("%d is largest\n",num1);

if(num2>num3)

printf("%d is the smallest",num3);

else

printf("%d is the smallest",num2);

}

else

printf("%d is largest\n%d is the smallest\n",num3,num2);

else if(num2>num3)

{

printf("%d is largest\n",num2);

if(num1>num3)

printf("%d is the smallest\n",num3);

else

printf("%d is the smallest\n",num1);

}

else

printf("%d is largest\n%d is the smallest\n",num3,num1);

}

***Output:***

Enter three numbers:

34 45 67

67 is largest

34 is the smallest

**Assignment No. 10**

**Check whether a given year is a leap year or not**

***Program code:***

#include<stdio.h>

void main()

{

int year;

printf("Enter the year: ");

scanf("%d",&year);

if((year%100)==0)

if((year%400)==0)

printf("It is a leap year\n");

else

printf("It is not a leap year");

else if((year%4)==0)

printf("It is a leap year");

else

printf("It is not a leap year");

}

***Output:***

Enter the year: 1998

It is not a leap year

Enter the year: 2016

It is a leap year

**Assignment No. 11**

**Calculate the telephone bill as per the call rate given below:**

**Rental = Rs. 250**

**First 100 calls @ Rs. 0.2**

**Next 100 calls @ Rs. 0.3**

**Remaining calls @ Rs. 0.5**

***Program code:***

#include<stdio.h>

void main()

{

int calls;

float bill;

printf("Enter the number of calls: ");

scanf("%d",&calls);

bill=250; /\*Rental\*/

if(calls<=100)

{

bill=bill+(calls\*0.2); /\*first 100 calls at 0.2 rs per call\*/

}

else if(calls<=200)

{

calls=calls-100;

bill=bill+20+(0.3\*calls); /\*Second 200 calls at 0.3 rs per call\*/

}

else

{

calls=calls-200;

bill=bill+50+(calls\*0.5); /\*Rest calls are at 0.5 rs per call\*/

}

printf("Net amount is: Rs. %0.2f",bill);

}

***Output:***

Enter the number of calls: 300

Net amount is: Rs. 350.00

**Assignment No. 12**

**Solve a given quadratic equation(without imaginary roots)**

***Program code:***

#include<stdio.h>

#include<math.h>

void main()

{

int a,b,c,dis;

float root1,root2;

printf("Enter the coefficients a,b and c in a quadratic equation ax^2+bx+c=0\n");

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

printf("The Quadratic equation is (%d)x^2+(%d)x+(%d)=0\n",a,b,c);

dis=(b\*b)-(4\*a\*c);

if(dis>=0)

{

root1=((-b)+sqrt(dis))/(2\*a);

root2=((-b)-sqrt(dis))/(2\*a);

printf("The roots are %0.2f and %0.2f",root1,root2);

}

else

{

printf("The equation has complex roots");

}

}

***Output:***

Enter the coefficients a,b and c in a quadratic equation ax^2+bx+c=0

12 23 34

The Quadratic equation is (12)x^2+(23)x+(34)=0

The equation has complex roots

Enter the coefficients a,b and c in a quadratic equation ax^2+bx+c=0

6 36 6

The Quadratic equation is (6)x^2+(36)x+(6)=0

The roots are -0.17 and -5.83