**20/03/2024**

**Assignments:**

1) Create a program to convert temperature from Fahrenheit to Celsius and vice versa. Use appropriate data types for the variables involved.

2) Develop a program that calculates the total cost of items purchased at a store, including tax. Use appropriate data types for prices and quantities.

3) Write a program to swap two numbers without using a temporary variable. Use appropriate data types for the variables involved.

4) Implement a program that converts a decimal number to binary representation. Make sure to handle both integer and fractional parts of the number.

**Program 1:**

#include <stdio.h>

int main() {

float fahrenheit,celsius;

printf("enter the farenheit value :");

scanf("%f",&fahrenheit);

celsius=(fahrenheit - 32)\*5/9;

printf("celsius value is : %f\n",celsius);

fahrenheit=(celsius\* 9/5) + 32;

printf("fahrenheit value is : %f",fahrenheit);

return 0;

}

**Program 2:**

#include <stdio.h>

int main()

{

short int Price,Quantity;

float Tax,Total\_cost,tax\_rate=0.1;

printf("enter the Price : ");

scanf("%f",&Price);

printf("enter the Quantity : ");

scanf("%f",&Quantity);

printf("enter the tax\_rate : ");

scanf("%f",&tax\_rate);

Tax = Price \* tax\_rate;

Total\_cost=(Price\*Quantity)+Tax;

printf("Total Cost is :%f",Total\_cost);

return 0;

}

**Program 3:**

#include <stdio.h>

int main()

{

int firstVariable,secondVariable;

printf("enter the firstVariable :");

scanf("%d",&firstVariable);

printf("enter the secondVariable :");

scanf("%d",&secondVariable);

firstVariable=firstVariable+secondVariable;

secondVariable=firstVariable-secondVariable;

firstVariable=firstVariable-secondVariable;

printf("enter the firstVariable : %d\n",firstVariable);

printf("enter the secondVariable : %d",secondVariable);

}

**Program 4:**

#include <stdio.h>

int main()

{

int binary\_array[20],i=0,decimal\_num;

printf("enter the decimal number :");

scanf("%d",&decimal\_num);

while(decimal\_num != 0)

{

binary\_array[i++]=decimal\_num%2;

decimal\_num/=2;

}

for(int j=i-1;j>=0;j--)

{

printf("%d",binary\_array[j]);

}

}