ASSIGNMENT-3

Name-Asish kumar prusty

1.
```c
#include<stdio.h>

int main()

{
        int a=125,b=12345;

        long ax=1234567890;

        short s=4043;

        float x=2.13459;

        double dx=1.1415927;

        char c='W';

        unsigned long ux=2541567890;

        printf("a+c=%d\n",a+c);

        printf("x+c=%f\n",x+c);

        printf("dx+x=%f\n",dx+x);

        printf("a+x=%f\n",a+x);

        printf("s+b=%d\n",s+b);

        printf("ax+b=%ld\n",ax+b);

        printf("s+c=%hd\n",s+c);

        printf("ax+c=%ld\n",ax+c);

        printf("ax+ux=%lu\n",ax+ux);
```

```
    return(0);

}
```

Output:-

a+c=212

x+c=89.134590

dx+x=3.276183

a+x=127.134590

s+b=16388

ax+b=1234580235

s+c=4130

ax+c=1234567977

ax+ux=3776135780

ASSIGNMENT-4

Name-Asish kumar prusty

```
1. #include<stdio.h>

int main()

{

        char a;

        printf("Enter the character ");

        scanf("%c",&a);
```

```c
        if(a=='a'||a=='A'||a=='e'||a=='E'||a=='i'||a=='I'||a=='o'||a=='O'||a=='u'||
a=='U')
        {
                printf("Entered character is %c vowel",a);
        }
        printf("Entered character is %C constant",a);
        return(0);
}
```

Output:-

Enter the character L

Entered character is L constant

2.
```c
#include<stdio.h>
#include<math.h>
int main()
{
        float a,b,c,root1,root2,discrim,imagi;
        printf("Enter the value of a b c ");
        scanf("%f %f %f",&a,&b,&c);
        discrim=(b*b)-(4*a*c);
        if(discrim>0)
        {
```

```c
        root1=(-b+sqrt(discrim))/(2*a);

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

        printf("Two roots are %f %f",root1,root2);

    }

    else if(discrim==0)

    {

        root1=root2=-b/(2*a);

        printf("Two roots are equal %f %f",root1,root2);

    }

    else if(discrim<0)

    {

        root1=root2=-b/(2*a);

        imagi=sqrt(-discrim)/(2*a);

        printf("two roots are %f %f",root1,root2);

    }

    return(0);
```

Output:-

Enter the value of a b c 10

25

5

Two roots are -0.2192 -2.2807

3.
```c
#include<stdio.h>

int main()
{
        int year;

        printf("Enter the year ");

        scanf("%d",&year);

        if(year%4==0)

        {
                printf("The year %d is leap year",year);

        }

        else

        {
                printf("The year is not leap year");

        }

        return(0);

}
```
Output:-

Enter the year 2020

The year 2020 is leap year

4.
```c
#include<stdio.h>

int main()
```

```c
{
    int a,b;
    printf("Enter the two numbers ");
    scanf("%d %d",&a,&b);
            if((100-b)>(100-a))
            {
                    printf("First one is nearest");
            }
            else
            {
                    if((100-a)>(100-b))
                    {
                            printf("Second one is nearest");
                    }
                    else
                    {
                            printf("Two numbers are equal");
                    }
            }
        return(0);
}
```

Output:-

Enter the two numbers 56

52

First one is nearest

5. #include<stdio.h>

int main()

{

   int a=5,b=10,c=15;

        if((a-b)==(b-c))

        {

            printf("True");

        }

        else

        {

            printf("False");

        }

      return(0);

}

Output:-

True

```c
7. #include<stdio.h>

int main()
{
    int mark1,mark2,mark3,avg;

        printf("Enter the 3 marks ");

        scanf("%d %d %d",&mark1,&mark2,&mark3);

        avg=(mark1+mark2+mark3)/3;

        if(avg>=90&&avg<=100)

        {

                printf("The grade is A");

        }

        else

        {

                if(avg>=80&&avg<=89)

                {

                        printf("The grade is B");

                }

                else

                {

                        if(avg>=70&&avg<=79)

                        {

                            printf("The grade is C");
```

```c
            }
        else
        {
            if(avg>=60&&avg<=69)
            {
                printf("The grade is D");
            }
            else
            {
                if(avg>=0&&avg<=59)
                {
                    printf("The grade is F");
                }
            }
        }
    }
    return(0);
}
```

Output:-

Enter the 3 marks 69

54

89

The grade is C

8. #include<stdio.h>

#include<math.h>

int main()

{

   int month,year;

      printf("Enter the number of month ");

      scanf("%d",&month);

      switch(month)

      {

          case 1:

          printf("Days in a month is 31");

          break;

          case 2:

          printf("Enter the year");

          scanf("%d",&year);

          if(year%4==0)

          {

             printf("Days in month is 29");

          }

```c
else
{
        printf("Days in month is 28");
}
break;
case 3:
printf("Days in month is 31");
break;
case 4:
printf("Days in month is 30");
break;
case 5:
printf("Days in month is 31");
break;
case 6:
printf("Days in month is 30");
break;
case 7:
printf("Days in month is 31");
break;
case 8:
printf("Days in month is 31");
```

```c
        break;

        case 9:

        printf("Days in month is 30");

        break;

        case 10:

        printf("Days in month is 31");

        break;

        case 11:

        printf("Days in month is 30");

        break;

        case 12:

        printf("Days in month is 31");

        break;

        default:

        printf("Invalid month number");

    }

    return(0);

}
```

Output:-

Enter the number of month 5

Days in month is 31

```c
9. #include<stdio.h>

int main()
{
    int a,b,add,sub,mul,div,value;
    printf("Enter the two numbers ");
    scanf("%d %d",&a,&b);
    printf("Choose the option \n 1:Addition 2:Substraction 3:Multiplication 4:division ");
    scanf("%d",&value);
    switch(value)
    {
        case 1:
        printf("Addition is %d",a+b);
        break;
        case 2:
        printf("Substraction is %d",a-b);
        break;
        case 3:
        printf("Multiplication is %d",a*b);
        break;
        case 4:
        printf("Divisssion is %d",a/b);
```

```c
                break;

                default:

                printf("Invalid option");

        }

        return(0);
```

Output:-

Enter the two numbers 5

6

Choose the option

 1:Addition 2:Substraction 3:Multiplication 4:division 3

Multiplication is 30

10.
```c
#include<stdio.h>

#include<math.h>

int main()

{

   char grade;

        printf("Enter the grade ");

        scanf("%c",&grade);

        switch(grade)

        {

                case 'A':
```

```c
            printf("Excellent");

            break;

            case 'B':

            printf("Good");

            break;

            case 'C':

            printf("Average");

            break;

            case 'D':

            printf("Deficient");

            break;

            case 'E':

            printf("Failing");

            break;

            default:

            printf("Invalid grade");

        }

        return(0);

}
```

Output:-

Enter the grade D

Deficient