

Assignment=9

Switch case Control Programs.

1. write a program which takes a month as input and display number of days in that month.

```
#include <stdio.h>
int main()
{
    int x;
    while(1)
    {
        printf("\n Enter the month number : ");
        scanf("%d",&x);
        switch(x)
        {
            case 1 :
                printf("31 Days");
                break;
            case 2:
                printf("28 Days");
                break;
            case 3:
                printf("31 Days");
                break;
            case 4:
                printf("30 Days");
                break;
            case 5:
                printf("31 Days");
                break;
            case 6:
                printf("30 Days");
                break;
            case 7 ... 8 :
                printf("31 days");
                break;
            case 9 :
                printf("30 Days");
                break;
            case 10:
                printf("31 Days");
                break;
            case 11:
                printf("30 Days");
```

```

        break;
    case 12 :
        printf("31 Days");
        break;
    default:
        printf("Invalid Option");
    }
}
}

```

2. write a menu driven program from the following option.1. Addition

2.Subtraction

3.Multiplication

4.division

5. Exit

```

#include <stdio.h>
int main()

{
    int a,b;char choice;
    while(1)
    {

printf("\n*****\n*****");
        printf("\n Enter your Choice from Given Below : ");
        printf("\na. Addition");
        printf("\nb. Subtraction");
        printf("\nc. Multiplication");
        printf("\nd. Division");
        printf("\ne. Exit");
        printf("\n\nEnter Option : ");
        fflush(stdin);
        scanf("%c",&choice);
        switch(choice)
        {
            case 'a':
                printf("\n Enter two Number for Addition : ");
                scanf("%d%d",&a,&b);
                printf("Addition of two Number is %d ",a+b);
                break;
            case 'b':
                printf("\n Enter two Number for Subtraction : ");
                scanf("%d%d",&a,&b);
                printf("Subtraction of two Number is %d ",a-b);
                break;
            case 'c':

```

```

        printf("\n Enter two Number for Multiplication : ");
        scanf("%d%d",&a,&b);
        printf("multipliacion of two Number is %d ",a*b);
        break;
    case 'd':
        printf("\n Enter two Number for Division : ");
        scanf("%d%d",&a,&b);
        printf("Quotitened is %d ",a/b);
        break;
    case 'e':
        exit(1);
    default:
        printf("\n Invalid Option Please Enter The given Above Option ");
    }
}
}

```

// 3. write a program which takes the day number of a week and displays a unique greeting message of the day.

```

#include <stdio.h>
int main()
{
    int x;
    while(1)
    {
        printf("\n\n*****");
        printf("\n Enter the Day number : ");
        scanf("%d",&x);
        switch(x)
        {
            case 1:
                printf("Good Mornig Today is Sunday Have a Nice Day");
                break;
            case 2:
                printf("Good Morning Today is Monday Have a Nice Day");
                break;
            case 3:
                printf("Good Morning Today is Tuesday Have a Nice Day");
                break;
            case 4:
                printf("Good Morning Today is Wednesday Have a Nice Day");
                break;
            case 5:
                printf("Good Morning Today is Thursday Have a Nice Day");
                break;
            case 6:
                printf("Good Morning Today is Friady Have a Nice Day");

```

```

        break;
    case 7:
        printf("Good Morning Today is Saturday Have a Nice Day");
        break;
    default :
        printf("\n Invalid Number");
    }
}

}

```

4. write a menu driven program with the following options .

1. check whether a given set of three numbers is the length of Isosceles Triangle or Not.
2. check whether a given set of three numbers are the length of sides of the Right angle Triangle or Not.
3. check whether a given set of three numbers are equilateral Triangle or Not.

```

#include <stdio.h>
int main()
{
    int a,b,c,choice;
    while(1)
    {
        printf("\n*****");
    );
        printf("\n Enter your Choice");
        printf("\n1. Check Weather a given triangle is Isosceles Triangle or Not");
        printf("\n2. Check Weather a given triangle is Right angle triangle or Not");
        printf("\n3. Check Weather a given triangle is Equilateral Triangle or Not");
        printf("\n4. Exit");
        printf("\n Enter options : ");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:
                printf("Enter The Lenght of Isosceles Triangle : ");
                scanf("%d%d%d",&a,&b,&c);
                if(a==b || a==c || b==c)
                    printf("\n Isosceles Triangle");
                else
                    printf("\n Not an Isosceles Triangle");
                break;
            case 2:
                printf("\n Enter The lenght for right angle Triangle :");
                scanf("%d%d%d",&a,&b,&c);

```

```

if(a*a==(b*b+c*c) || b*b==(a*a+c*c)|| c*c==(a*a+b*b))
printf("right angle triangle");
else
printf("not a right angle triangle");
break;
case 3:
    printf("\n Enter the length for Equilateral Triangle : ");
    scanf("%d%d%d",&a,&b,&c);
    if(a==b && a==c && b==c)
    printf("Equilateral Triangle");
    else
    printf("Not a Equilateral Triangle");
    break;
case 4:
    exit(1);
default:
    printf("\n Please Choose The Correct Option ");
}
}
}

```

5. Convert The following if-else-if construct into switch Case : if(var==1) printf("good") else if(var==2) printf("better") if(var==3)printf("best") else printf("Invalid");

```

#include <stdio.h>
int main()
{
    int x;
    while(1)
    {

printf("\n\n*****");
        printf("\nEnter Number : ");
        scanf("%d",&x);
        switch(x)
        {
            case 1:
                printf("\n\"good\"");
                break;
            case 2:
                printf("\n\"better\"");
                break;
            case 3:
                printf("\n\"best\"");
                break;
            default :

```

```

        printf("\n\"Invalid\\");
    }
}
}

```

6. write a program to find Leap Year or not (using Switch Case).

```

#include <stdio.h>
int main()
{
    int x;
    while(1)
    {
        printf("\n\n*****");
        printf("\nEnter Year : ");
        scanf("%d",&x);
        switch(x%4)
        {
            case 0 :
                if(x%100)
                    printf("Leap year");
                else if(x%400)
                    printf("not Leap Year");
                else
                    printf("leap year");
                break;
            case 1 ... 10:
                printf("Not a Leap Year");
        }
    }
}

```

7. Program to take the value from the user as Input Electricity unit charges and calculate Total electricity Bill according to the Given Condition using the switch statement.

for the first 50 unit Rs 0.50/unit
 for the next 100 unit Rs 0.75/unit
 for the next 100 unit Rs 1.20 /unit
 for units above 250 Rs 1.50/unit
 An additional surcharge of 20% is added to the bill

```

#include <stdio.h>

```

```

int main()
{
    float x,amount=0,total=0;
    printf("\n Enter the Electricity Unit Charges : ");
    scanf("%f",&x);
    switch(x<=50)
    {
        case 1:
            amount=x*0.5;
            break;
        case 0: switch(x<=150)
            {
                case 1:
                    amount=25+(x-50)*0.75;
                    break;
                case 0:
                    switch(x<=250)
                    {
                        case 1:
                            amount=100+(x-150)*1.20;
                            break;
                        case 0 :
                            amount=220+(x-250)*1.50;
                            break;
                    }
                    break;
            }
            break;
    }
    total=(amount + amount*0.20);
    printf("Total Amount is %.3f",total);
}

```

8. program to convert positive number into negative number and negative number into positive number.

```

#include <stdio.h>
int main()
{
    int x,k=-1,y;
    while(1)
    {

```

```

printf("\n\n*****
*");
printf("\n Enter the Number : ");
scanf("%d",&x);
switch(x<=0)
{
case 1:
    y=k*x;
    printf("%d",y);
    break;
case 0:
    y=x-x-x;
    printf("%d",y);
    break;
}
}
}

```

9. program to convert an even number into its upper odd number.

```

#include <stdio.h>
int main()
{
    int x;
    while(1)
    {

printf("\n\n*****
*");
printf("\n Enter the Number : ");
scanf("%d",&x);
switch(x%2)
{
case 0:
    x=x+1;
    printf("%d",x);
    break;
case 1:
    printf("\n please Enter Only Even Number ");
    break;
}
}
}

```

10. program to find the root of a Quadratic Equation using switch case.


```

#include <stdio.h>
#include <math.h>
int main()
{
    int a,b,c,d; float total,avg;
    while(1)
    {

printf("\n\n*****");
        printf("\nplease Enter three value : ");
        scanf("%d%d%d",&a,&b,&c);
        d= (b*b)-(4*a*c);
        switch(d>=0)
        {
            case 1:
                total = (-b + sqrt(d)) / (2.0*a);
                avg = (-b - sqrt(d)) / (2.0*a);
                printf("The Quadratic Equation of Given Number Are %.3f and
%.3f",total,avg);
                break;
            case 0:
                printf("\n Invalid Equation ");
                break;
        }
    }
}

```