

## ASSIGNMENT - 9

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

```
#include <stdio.h>
int main ()
{
    int month;
    printf ("Enter month number ");
    scanf ("%d", &month);
    switch (month)
    {
        case 1:
            printf ("31 days");
            break;
        case 2:
            printf ("28 days or 29 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:
            printf ("31 days");
            break;
        case 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("NOT found");
break;
}
return 0;
}

```

2. Write a menu driven program with the following options
- (a) Addition
  - (b) Subtraction
  - (c) Multiplication
  - (d) Division
  - (e) Exit

```

#include <stdio.h>
int main ()
{
    int a, b, sc;
    printf("Enter the following");
    printf("\n 1. Addition");
    printf("\n 2. Subtraction");
    printf("\n 3. Multiplication");
    printf("\n 4. Division");
    printf("\n 5. Exit");
    scanf("%d", &x);
}

```

```
switch (x)
```

```
{
```

```
Case 1:
```

```
printf ("Sum is %d", a+b);
```

```
break;
```

```
Case 2:
```

```
printf ("Difference is %d", a-b);
```

```
break;
```

```
Case 3:
```

```
printf ("Multiplication is %d", a*b);
```

```
break;
```

```
Case 4:
```

```
printf ("Division is %d", a/b);
```

```
break;
```

```
Case 5:
```

```
break;
```

```
return 0;
```

```
}
```

3. Write a program which takes the day number of a week and display a unique greeting message for the day.

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

```
int main ()
```

```
{
```

```
int days;
```

```
printf ("Enter day number ");
```

```
scanf ("%d", &days);
```

```
switch (days)
```

```
{
```

```
Case 1:
```

```
printf ("Monday! Happy for day ");
```

```
break;
```

```

case 2 : printf ("Tuesday ! Happy Propuse day");
break;
Case 3 : printf ("Wednesday ! Happy Chocolate day");
break;
Case 4 : printf ("Thursday ! Happy Teddy Day");
break;
Case 5 : printf ("Friday ! Happy Promise day");
break;
Case 6 : printf ("Saturday ! Happy Missing day");
Case 7 : printf ("Sunday ! Happy Break up day");
break;
default :
printf ("NOT Found");
break;
}
return 0;
}

```

For char we should use  
F flush (8+din)

Ex - Char choice;

F flush (8+din)

scanf ("%c", &choice);

4. Write a menu driven program with the following options :

- (a) Check whether a given set of three numbers are lengths of an isosceles triangle or not
- (b) Check whether a given set of three numbers are length of sides of a right angled triangle or not
- (c) Check whether a given number set of three numbers are equilateral triangle or not
- (d) Exit .

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

```
int main()
```

```
{
```

```
    int a, b, c, x;
```

```
    printf("Enter Triangle Sides:");
```

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

```
    printf("In Enter Choice");
```

```
    printf("\n 1. To check (Isosceles Triangle);
```

```
    printf("\n 2. To check Right angled triangle");
```

```
    printf("\n 3. To check Equilateral triangle");
```

```
    printf("\n 4. Exit");
```

```
    scanf("%d", &x);
```

```
switch(x)
```

```
{
```

```
    Case 1:
```

```
    if (a==b || b==c || c==a)
```

```
        printf("Yes it is isosceles triangle");
```

```
    else
```

```
        printf("Not a isosceles triangle");
```

```
    break;
```

```
    Case 2:
```

```
    if (a*a) = (b*b + c*c) || (b*b) = (a*a + c*c)
```

```
        || c*c = (a*a + b*b)
```

```

        PrintF ("Right angled Triangle");
    else
        PrintF ("Not Right Angled Triangle");
    break;
Case 3:
    if (a == b == c)
        PrintF ("It is Equilateral Triangle");
    else
        PrintF ("Not a Equilateral Triangle");
    break;
Case 4:
    break;
default:
    PrintF ("Not Found!");
}

```

Return Decision

5. Convert the following if-else-if Construct into Switch Case:

```

if (var == 1)
    System.out.println ("good");
else if (var == 2)
    System.out.println ("better");
else if (var == 3)
    System.out.println ("best");
else
    System.out.println ("invalid");

```

```

#include <stdio.h>
int main ()
{

```

```

    int var;
    printf ("Enter Number");

```

```

scanf ("%d", & Var);
switch (Var)
{
    case 1:
        printf ("Good");
        break;
    case 2:
        printf ("Better");
        break;
    case 3:
        printf ("better");
        break;
    case 4:
        default:
            printf ("invalid");
            break;
}
return 0;
}

```

6. Write a Program to Check whether Year is leap year or not . Using Switch Statement .

```

#include <stdio.h>
int main()
{
    int Year;
    printf ("Enter Year");
    scanf ("%d", & Year);
    switch (Year % 100 == 0)
    {
        Case 1:
            switch (Year % 400 == 0)
            {
                Case 1:
                    printf ("it is leap year");
                    break;

```

```

Case 0:
printf("Not a leap year");
break;
}

Case 0:
switch (year == 0)
{
    case 1:
        printf("it is leap year");
        break;
    Case 0:
        printf("Not a leap year");
        break;
    }

break;
}

return 0;
}

```

Q7. 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.

~~#include <stdio.h>~~  
int main()

For the first 50 units RS 0.50 /unit

For the next 100 units RS 0.75 /unit

For the next 100 units RS 1.00 /unit

For the units above 250 RS. 1.20 /unit

An additional surcharge of 20% is added to the bill.

```
#include <stdio.h>
int main()
{
    int , amt = 0, unit, float total = 0;
    printf ("%.d", &unit);
    switch (unit <= 50)
    {
```

Case 1:

$$amt = Unit * 0.50;$$

break;

Case 0:

```
switch (unit <= 150)
```

```
{
```

Case 1:

$$amt = 25 + (Unit - 50) * 0.75;$$

break;

Case 0:

```
switch (unit <= 250)
```

```
{
```

Case 1:

$$amt = 100 + (Unit - 150) * 1.20;$$

break;

Case 0:

$$amt = 220 + (Unit - 200) * 1.50;$$

break;

}

break;

}

break;

}

$$Total = amt + amt * 0.20;$$

```
printf ("Total Amount : %.2f", total);
```

```
Medium 0;
```

}

8. Program to Convert positive number into negative number and negative number into a positive number using switch statement.

```
#include <stdio.h>
int main()
{
    int num;
    printf("Enter a number");
    scanf("%d", &num);
    switch (num > 0)
    {
        Case 1:
            printf("%d", -num);
            break;
        Case 0:
            printf("%d", (-2 * num) + num);
            break;
    }
    return 0;
}
```

9. Program to Convert even number into its upper nearest odd number using switch statement

```
#include <stdio.h>
int main()
{
    int num;
    printf("Enter a Number");
    scanf("%d", &num);
    switch (num / 2 == 0)
    {
        Case 1:
            printf("%d", num + 1);
            break;
        Case 0:
            printf("%d", num);
            break;
    }
    return 0;
}
```

10. C Program to find roots of a quadratic equation using switch case:

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

```
int main()
```

```
{
```

```
    int a, b, c, d;
```

```
    printf("Enter value of a: b: c:");
```

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

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

```
switch(d > 0)
```

```
{
```

```
    Case 1:
```

```
    printf("Two real solution");
```

```
    break;
```

```
Case 0:
```

```
switch(d < 0):
```

```
{
```

```
    Case 1
```

```
    printf("Complex solution");
```

```
    break;
```

```
Case 0:
```

```
    printf("One real solution");
```

```
    break;
```

```
}
```

```
break;
```

```
return 0;
```

```
}
```