

## Assignment - 9

1. Write a program which takes the Month Number as an input and display Number of days in the Month.

```
#include <stdio.h>
int main()
{
    int x, y;
```

```
printf("Enter a Month Number");
```

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

```
switch(x)
```

```
{
```

```
Case 1:
```

```
    printf("Days 31");
    break;
```

```
Case 2:
```

```
    printf(" Days 30");
    break;
```

```
Case 3:
```

```
    printf(" Days 31");
    break;
```

```
Case 4:
```

```
    printf(" Days 30");
    break;
```

```
Case 5:
```

```
    printf(" Days 31");
    break;
```

```
Case 6:
```

```
    printf(" Days 30");
    break;
```

Case 7:

```
printf(" Days 31");  
break;
```

Case 8:

```
printf(" Days 31");  
break;
```

Case 9:

```
printf(" Days 30");  
break;
```

Case 10:

```
printf(" Days 31");  
break;
```

Case 11:

```
printf(" Days 30");  
break;
```

Case 12:

```
printf(" Days 31");  
break;
```

default:

```
break;
```

```
}
```

```
}
```

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 x, y, s=0, c;
    printf("1. addition\n2. subtraction\n3. Multiplication
        \n4. Division\n");
    scanf("%d", &c);
    printf(" Enter a two Number");
    scanf("%d %d", &x, &y);
```

Switch (c)

{

Case 1:

```
    printf(" Addition is %d", x+y);
    break;
```

Case 2:

```
    printf(" Subtraction is %d", x-y);
    break;
```

Case 3:

```
    printf(" Multiplication is %d", x*y);
    break;
```

Case 4:

```
    printf(" Division is %d", x/y);
    break;
```

default:

```
    break;
```

Signature.....

3. Write a program which takes the day Number of a week and displays a unique greeting Message for the day.

```
#include <stdio.h>
int main()
{
    int x;
    printf("Enter the Number");
    scanf("%d", &x);
    Switch(x);

    {
        Case 1:
            printf("Have a good day");
            break;

        Case 2:
            printf("Never lose your hope");
            break;

        Case 3:
            printf("Do not change yourself");
            break;

        Case 4:
            printf("It is a New day");
            break;

        Case 5:
            printf("Nice day");
            break;

        Case 6:
            printf("Good Morning");
            break;

        Case 7:
            printf("Good afternoon");
            break;

        default:
            break;
    }
}
```

4 Write a menu driven program with the following option

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 angle triangle or not.

c. Check whether a given set of three numbers are equilateral triangle or not ~~exit~~

d. exit

```
#include <stdio.h>
int main()
{
    int a, b, c, s;
```

printf("1. Isosceles triangle\n2. Right angle triangle\n3.  
Equilateral triangle");

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

```
printf("Enter three side of triangle\n");
```

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

```
if (a+b>c)
```

```
{
```

```
switch(s)
```

```
{
```

```
case 1:
```

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

```
printf("Isosceles triangle");
```

```
break;
```

```
else
```

```
printf("Not Isosceles triangle");
```

```
break;
```

Signature.....

case 2:

```

if ((a*a) + (b*b) == (c*c))
    printf(" Right angle triangle");
else if ((b*b) + (c*c) == (a*a))
    printf(" Right angle triangle");
else if ((c*c) + (a*a) == (b*b))
    printf(" Right angle triangle");
else
    printf(" Not Right angle triangle");
break;
}

```

case 3:

```

if ((a==b) & (b==c))
    printf(" Equilateral triangle");
else
    printf(" Not Equilateral triangle");
break;
}

```

default:

break;

}

return 0;

}

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 Variable");
    scanf("%d", &Var)
```

```
switch (Var)
```

```
{
```

Case 1:

```
    printf(" Good");
    break;
```

Case 2:

```
    printf(" better");
    break;
```

Case 3:

```
    printf(" best");
    break;
```

default :

```
    printf(" Invalid");
    break;
```

Signature.....

6. program to check whether a year is a leap year or not. Using switch statement

```
#include <stdio.h>
int main()
{
    int x;
    printf(" Enter year");
    scanf("%d", &x);
    x = x%4;
    switch(x)
    {
        case 0:
            printf(" leap year");
            break;
        default:
            printf(" Not leap year");
            break;
    }
    return 0;
}
```

① Program to take the value from the user as  
to put electricity unit charge and calculate total  
electricity bill according to the given condition.  
Using the switch statement.

for the first 50 units Rs 0.50/unit  
for the Next 100 Units Rs 0.75/unit  
for the Next 100 Units Rs 1.20/unit  
for Unit above 250 Rs 1.50/unit

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

```
#include <stdio.h>
int main()
{
    int y;
    float S, X, Y = 0;
    printf(" Enter electricity bill unit");
    scanf("%f", &X);
    if (X <= 50)
        Y = 1;
    else if (X > 50 & X <= 150)
        Y = 2;
    else if (X > 150 & X <= 250)
        Y = 3;
    else if (X > 250)
        Y = 4;
    switch(Y)
    {
        case 1:
            S = 0.50 * X;
            break;
        case 2:
            S = 0.75 * X;
            break;
        case 3:
            S = 1.20 * X;
            break;
        case 4:
            S = 1.50 * X;
            break;
    }
    S = S + (S * 0.20);
    printf(" Total Electricity Bill is %f", S);
}
```

```
printf(" bill is %.f", s),
```

```
break;
```

case 2:

```
s = 0.75 * x;
```

```
printf(" bill is %.f", s);
```

```
break;
```

case 3:

```
s = 1.2 * x;
```

```
printf(" bill is %.f", s);
```

```
break;
```

case 4:

```
s = 1.5 * x;
```

```
y = s * 0.2;
```

```
s3 = s + y;
```

```
printf(" bill is %.f", s);
```

```
break;
```

default:

```
break;
```

```
}
```

```
return 0;
```

```
}
```

⑧ Program to Convert a positive Number into  
a ~~Mixed~~ Negative and Negtive into positive Number.  
Using switch Statement

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

```
int main()
```

```
{
```

```
    signed int x; int y;
```

```
    print("Enter a Number");
```

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

```
    if (x > 0)
```

```
        y = 1;
```

```
    else
```

```
        y = 2;
```

```
    switch (y)
```

```
{
```

```
    case 1:
```

```
        print("Negative is %d", x * (-1));
```

```
        break;
```

```
    case 2:
```

```
        print("positive is %d", x * (-1));
```

```
        break;
```

```
    default:
```

```
        break;
```

```
}
```

```
return 0;
```

```
}
```

9. Program to Convert even Number into its upper nearest odd

Number switch statement

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

```
int main()
```

```
{
```

```
int x, y;
```

```
printf("Enter a Number");
```

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

```
if (x % 2)
```

```
y = 2
```

```
else
```

```
y = 1;
```

```
switch(y)
```

```
{
```

```
case 1:
```

```
printf("odd Number is %d", x+1);
```

```
break;
```

```
case 2:
```

```
printf("Already an odd odd", x);
```

```
break;
```

```
default:
```

```
break;
```

```
}
```

```
return 0;
```

```
}
```

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C program to find all the roots of a quadratic equation using switch case.

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

```
int main()
```

```
{
```

```
int a, c, d, y, r1, r2;  
int b;
```

```
printf("Enter coefficient of  $x^2$ ");
```

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

```
printf("Enter coefficient of  $x$ ");
```

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

```
printf("Enter Constant");
```

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

```
d = (b*b) - (4*a*c);
```

```
if (d >= 0)
```

```
y = 1;
```

```
else if (d < 0)
```

```
y = 2;
```

```
else  
y = 2;
```

```
switch (y)
```

```
{
```

```
case 1:
```

$$r1 = ((-b) + \sqrt{d}) / (2 * a);$$

$$r2 = ((-b) - \sqrt{d}) / (2 * a);$$

```
printf("roots are %d %d", r1, r2);
```

```
break;
```

```
case 2:
```

```
printf("Imaginary roots");
```

```
break;
```

```
default:
```

```
break;
```

```
} return 0;
```

Signature.....