**Assignment - 9** ***A Job Ready Bootcamp in C++, DSA and IOT MySirG***

***Switch Case Problems***

**1. Write a program which takes the month number as an input and display**

**number of days in that month.**

#include<stdio.h>

int main()

{

int month;

printf("Enter the month number between 1 and 12");

scanf("%d",&month);

switch(month)

{

case 1:

printf(" 31");

break;

case 2:

printf("28/29");

break;

case 3:

printf("31");

break;

case 4:

printf("30");

break;

case 5:

printf("31");

break;

case 6:

printf("30");

break;

case 7:

printf("31");

break;

case 8:

printf("31");

break;

case 9:

printf("30");

break;

case 10:

printf("31");

break;

case 11:

printf("30");

break;

case 12:

printf("31");

break;

default:

printf("invalid");

}

}

**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 choice ,a,b,c;

printf("\n 1.Addition");

printf("\n 2.Subtraction");

printf("\n 3.Multipliation");

printf("\n 4.Division");

printf("\n 5.Exit");

printf("Enter your choice");

scanf("%d",&choice);

switch(choice)

{

case 1:

printf("Enter two numbers");

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

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

break;

case 2:

printf("Enter two numbers");

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

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

break;

case 3:

printf("Enter two numbers");

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

printf("multiplication is %d",a\*b);

break;

case 4:

printf("Enter two numbers");

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

printf("division is %d",a%b);

break;

case 5:

printf("\n Thank you");

printf("Press any key to exit");

}

}

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 day;

printf("Enter a number");

scanf("%d",&day);

switch(day)

{

case 1:

printf("Today is Monday");

break;

case 2:

printf("Today is Tuesday");

break;

case 3:

printf("Today is Wednsday");

break;

case 4:

printf("Today is Thirsday");

break;

case 5:

printf("Today is Friday");

break;

case 6:

printf("Today is Saturday");

break;

case 7:

printf("Today is Sunday");

break;

}

return 0;

}

**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 lengths of sides of**

**a right angled triangle or not**

**c. Check whether a given set of three numbers are equilateral triangle**

**or not**

**d. Exit**

#include<stdio.h>

int main()

{

int choice,a,b,c;

printf("Enter your choice\n");

printf("1. To check isosceles triangle\n");

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

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

printf("4. Exit\n");

scanf("%d",&choice);

switch(choice)

{

case 1:

printf("Enter length of 3 sides of triangle\n");

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

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

{

printf("Isosceles Triangle\n");

}

else

printf("Not Isosceles Triangle\n");

break;

case 2:

printf("Enter length of 3 sides of triangle\n");

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

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

{

printf("Right Angle Triangle\n");

}

else

printf("Not Right Angle Triangle\n");

break;

case 3:

printf("Enter length of 3 sides of triangle\n");

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

if((a==b) && (b==c))

{

printf("Equilateral Triangle\n");

}

else

printf("Not Equilateral Triangle\n");

break;

case 4:

printf("\nEnter any key to exit...");

break;

default:

printf("invalid");

}

return 0;

}

**5. Convert the following if-else-if construct into switch case:**

if(var == 1)

printf("good");

else if(var == 2)

printf("better");

else if(var == 3)

printf("best");

else

printf("invalid");

#include<stdio.h>

int main()

{

int a;

printf("Enter a number");

scanf("%d",&a);

switch(a)

{

case 1:

printf("Good");

break;

case 2:

printf("better");

break;

case 3:

printf("best");

break;

default:

printf("invalid");

break;

}

return 0;

}

**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 a number");

scanf("%d",&x);

switch(x%100==0)

{

case 1:switch(x%400==0)

{

case 1:printf(" Leap Year"); break;

case 0:printf(" Non Leap Year"); break;

}break;

case 0:switch(x%4==0)

{

case 1:printf(" Leap Year");break;

case 0:printf(" Non Leap Year");break;

}break;

}

}

**8. Program to convert a positive number into a negative number and negative**

**number into a positive number using a switch statement.**

#include<stdio.h>

int main()

{

int a,x;

printf("Enter a number");

scanf("%d",&a);

switch(a)

{

case 0:

printf("Enter a positive number");

scanf("%d",&x);

printf("%d",x\*(-1));

break;

case 1:

printf("Enter a negative number");

scanf("%d",&x);

printf("%d",(x\*(-1)));

break;

}

return 0;

}

**9. Program to Convert even number into its upper nearest odd number**

Switch Statement.

#include<stdio.h>

int main()

{

int a,x;

printf("Enter a number");

scanf("%d",&a);

switch(a%2==0)

{

case 1:

printf("%d",a+1);

break;

case 0:

printf("invalid");

break;

}

return 0;

}