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

***Switch Case Problems***

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/\*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 1 to 12:");

    scanf("%d",&month);

    switch (month)

    {

        case 1:

        printf("January:");

        break;

        case 2:

        printf("February:");

        break;

        case 3:

        printf("March:");

        break;

        case 4:

        printf("April:");

        break;

        case 5:

        printf("May:");

        break;

        case 6:

        printf("June:");

        break;

        case 7:

        printf("July:");

        break;

        case 8:

        printf("August:");

        break;

        case 9:

        printf("September:");

        break;

        case 10:

        printf("October:");

        break;

        case 11:

        printf("November:");

        break;

        case 12:

        printf("December:");

        break;

        default:

        printf("Please enter a month 1 to 12:");

    }

    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>

#include<stdlib.h>

int main()

{

    int a,b;

    char ch;

    printf("Welcome to Simple Calculator:\n");

    printf("----------------------------:\n");

    printf("Choose the Operator...(\*,/,+,-):\n");

    scanf("%c",&ch);

    printf("----------------------------:\n");

    printf("Enter the two numbers.......:\n");

    scanf("%d%d",&a,&b);

    printf("----------------------------:\n");

    switch(ch)

    {

    case '\*':

        printf("%d \* %d = %d\n",a,b,a\*b);

        break;

    case '/':

        printf("%d / %d = %d\n",a,b,a/b);

        break;

    case '+':

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

        break;

    case '-':

        printf("%d - %d = %d\n",a,b,a-b);

        break;

    default:

        exit(0);

    }

    return 0;

}

#include<stdio.h>

#include<stdlib.h>

int main()

{

    int week;

    printf("Enter the week 1 to 7...");

    scanf("%d",&week);

    switch(week)

    {

    case 1:

        printf("Monday...");

        break;

    case 2:

        printf("Tuesday...");

        break;

    case 3:

        printf("Wednesday...");

        break;

    case 4:

        printf("Thursday:");

        break;

    case 5:

        printf("Friday:");

        break;

    case 6:

        printf("Saturday:");

        break;

    case 7:

        printf("Sunday:");

        break;

    default:

        printf("Please Enter Week 1 to 7");;

    }

    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>

#include<stdlib.h>

int main()

{

    int n;

    printf("Enter the Choise Menu:\n");

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

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

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

    int a, b, c;

    scanf("%d", &n);

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

    scanf("%d %d %d", &a, &b, &c);

    switch (n)

    {

    case 1:

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

            printf("Isosceles");

        else

            printf("Not an isosceles");

        break;

    case 2:

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

            printf("Right Triangle:");

        else

            printf("Not Right Triangle:");

        break;

    case 3:

        if ((a == b || b == c))

            printf("Equailateral Triangle:");

        else

            printf("Not a Equilateral Triangle:");

        break;

    default:

        exit(0);

    }

}

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

#include<stdio.h>

int main()

{

    int book;

    printf("Enter the Book:");

    scanf("%d",&book);

    switch(book)

    {

        case 1:

        printf("Good:");

        break;

        case 2:

        printf("Better:");

        break;

        case 3:

        printf("Best:");

        break;

        default:

        printf("Invalid:");

    }

    return 0;

}

/\*6. Program to check whether a year is a leap year or not. Using switch

statement\*/

#include <stdio.h>

int main()

{

    int y=2024;

    switch(y%100==0)

    {

        case 1:

        switch(y%400==0)

        {

            case 0:

            printf("Leap Years:");

            break;

            case 1:

            printf("Not Leap Years:");

        }

        case 0:

        switch(y%4==0)

        {

            case 1:

            printf("Leap Years:");

            break;

            case 0:

            printf("Not Leap Years:");

            break;

        }

        break;

    }

    return 0;

}

/\*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.\*/

#include <stdio.h>

int main()

{

  float x = 224, amt = 0, total = 0;

  switch (x <= 50)

  {

  case 1:

    amt = x \* 0.5;

    break;

  case 0:

    switch (x <= 150)

    {

    case 1:

      amt = 25 + (x - 50) \* 0.75;

      break;

    case 0:

      switch (x <= 250)

      {

      case 1:

        amt = 100 + (x - 150) \* 1.20;

        break;

      case 0:

        amt = 220 + (x - 250) \* 1.5;

        break;

      }

      break;

    }

    break;

  }

  total = amt + amt \* 0.20;

  printf("Total Amount = %f", total);

  return 0;

}

/\*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 n;

    printf("Enter the numbers:");

    scanf("%d",&n);

    switch (n > 0)

    {

    case 1:

        printf("Negative Numbers:");

        break;

    case 0:

        switch (n < 0)

        {

        case 1:

            printf("Positive Numbers:");

            break;

        }

        break;

    }

    return 0;

}

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

Switch Statement.\*/

#include<stdio.h>

int main()

{

    int n;

    printf("Enter a numbers:");

    scanf("%d",&n);

    switch(n%2==0)

    {

        case 1:

        printf("Even numbers: %d",n+1);

        break;

        case 0:

        printf("Odd numbers: %d",n);

        break;

    }

    return 0;

}