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

ANS:-

#include<stdio.h>

#include<conio.h>

int main()

{

    int n;

    printf("Input month number: ");

    scanf("%d",&n);

    if(n==1||n==3||n==5||n==7||n==8||n==10||n==12)

    printf("31 Days");

    else if (n==2)

    printf("28 Days");

    else

    printf("30 Days");

    getch();

    return 0;

}

1. Write a menu driven program with the following options:
2. Addition
3. Subtraction
4. Multiplication
5. Division
6. Exit

ANS:-

#include<stdio.h>

#include<stdlib.h>

int main()

{

     while(1){

    char num;

    int n1,n2;

    printf("\nInput your choice: \na. Addition\nb. Substraction\nc. Multiplication\nd. Division\ne. Exit\n");

    scanf("%c",&num);

    switch (num)

    {

    case 'a':

        printf("Input two numbers: ");

        scanf("%d%d",&n1,&n2);

        printf("%d + %d = %d",n1,n2,n1+n2);

        break;

    case 'b':

        printf("Input two numbers: ");

        scanf("%d%d",&n1,&n2);

        printf("%d - %d = %d",n1,n2,n1-n2);

        break;

    case 'c':

        printf("Input two numbers: ");

        scanf("%d%d",&n1,&n2);

        printf("%d X %d = %d",n1,n2,n1\*n2);

        break;

    case 'd':

        printf("Input two numbers: ");

        scanf("%d%d",&n1,&n2);

        printf("%d/%d = %d",n1,n2,n1/n2);

        break;

    case 'e':

        exit(0);

        break;

    default:

    {

    printf("Invalid input");

        break;

    }

    }

    }

    return 0;

}

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

ANS:-

#include<stdio.h>

#include<conio.h>

int main()

{

    int n;

    printf("Input a number: ");

    scanf("%d",&n);

    switch (n)

    {

    case 1:

        printf("Mondays are the start of the work week which offer new beiginnings 52 times a year!");

        break;

    case 2:

        printf("It's TUESDAY! worry less, live more");

        break;

    case 3:

       printf("Happy Wednesday\nOutstrip your yesterday\nby today, to do your\nwork with more forxe\nthan ever begore.");

        break;

    case 4:

       printf("Thursday is a\nday to admit\n   your\nmistakes and\n  try to\n  improve");

        break;

    case 5:

       printf("Life is good specially on Friday");

        break;

    case 6:

        printf("May Saturday\nBe a day of \n  happiness\npeace, and\n  love");

        break;

    case 7:

       printf("  Happy Sunday\n\n Start the day\nright with a smile!\n\n  Good Morning");

        break;

    default:

        break;

    }

    getch();

    return 0;

}

1. Write a menu driven program with the following options:
2. Check whether a given set of three numbers are lengths of an isosceles triangle or not.
3. Check whether a given set of three numbers are lengths of sides of a right angled triangled triangle or not.
4. Check whether a given set of three numbers are equilateral triangle or not.
5. Exit.

ANS:-

#include<stdio.h>

#include<conio.h>

int main()

{

    int a,b,c;

    char n;

    printf("a. Check whether a given set of three numbers are lengths of an isosceles triangles or not\nb. Check whether a given set of three numbers are leghts of sides of a right angled triangle or not\nc. Check whether a given set of three numbers are length of equilateral triangle or not\n");

    printf("Input your choeice:\n");

    scanf("%c",&n);

    printf("Input sides of triangle: ");

    scanf("%d%d%d",&a,&b,&c);

    if(a+b>c&&b+c>a&&a+c>b)

    {

    switch (n)

    {

    case 'a':

        if(a==b||b==c||c==a)

        {

        printf("isosceles");

        break;

        }

        else

        {

        printf("Not isosceles");

         break;

        }

    case 'b':

        if(a>b&&a>c)

        {

          if(a\*a==b\*b+c\*c)

          {

              printf("Right angle triangle");

              break;

          }

          else

          {

              printf("Not Right angle triangle");

              break;

          }

        }

        if(b>a&&b>c)

        {

          if(b\*b==a\*a+c\*c)

          {

              printf("Right angle triangle");

              break;

          }

          else

          {

              printf("Not Right angle triangle");

              break;

          }

        }

        if(c>a&&c>b)

        {

          if(c\*c==a\*a+b\*b)

          {

              printf("Right angle triangle");

              break;

          }

          else

          {

              printf("Not Right angle triangle");

              break;

          }

        }

    case 'c':

       if(a==b&&b==c)

        {

          printf("Equilateral Triangle");

          break;

        }

        else

        {

          printf("Not Equilateral Triangle");

          break;

        }

    }

    }

    else

    printf("Triangle is not valid");

    getch();

    return 0;

}

1. 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”);

ANS:-

#include<stdio.h>

#include<conio.h>

int main()

{

   int var;

   printf("Input value: ");

   scanf("%d",&var);

   switch (var)

   {

   case 1:

    printf("good");

    break;

   case 2:

    printf("better");

    break;

   case 3:

    printf("best");

    break;

   default:

    printf("invalid");

    break;

   }

    getch();

    return 0;

}

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

ANS:-

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

int main()

{

    int n,num;

    while(1)

    {

    printf("\n\n0. To exit ");

    printf("\n1. To check even or odd");

    printf("\n\nInput your choice: ");

    scanf("%d",&num);

    switch(num)

    {

    case 1:

     printf("\nInput a number: ");

     scanf("%d",&n);

     if(n%2==0)

     {

      printf("even");

      break;

     }

     else

     {

      printf("Odd");

       break;

     }

    case 0:

     exit(0);

    }

    }

    getch();

    return 0;

}

1. Write a 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 units Rs. 0.50/unit

For the next 100 units Rs. 0.75/unit

For the next 100 units Rs. 1.20/unit

For units above 250 Rs. 1.50/unit

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

ANS:-

#include<stdio.h>

#include<conio.h>

int main()

{

    int n;

    printf("Input units: ");

    scanf("%d",&n);

    switch(n)

    {

    case 0 ... 50:

    printf("Bill = %.2f Rs.",(0.50)\*n+((0.50)\*n/5));

    break;

    case 51 ... 150:

    printf("Bill = %.2f Rs.",(0.75)\*n+((0.75)\*n/5));

    break;

    case 151 ... 250:

   printf("Bill = %.2f Rs.",(1.20)\*n+((1.20)\*n/5));

   break;

    default:

    printf("Bill = %.2f Rs.",(1.50)\*n+((1.50)\*n/5));

    }

    getch();

    return 0;

}

1. Program to convert a positive number into a negative number and negative number into a positive number using a switch statement.

ANS:-

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

int main()

{

    int n,num;

    while(1)

    {

    printf("\n\n0. To exit ");

    printf("\n1. To convert positive to negative or negative to positive ");

    printf("\n\nInput your choice: ");

    scanf("%d",&num);

    switch(num)

    {

    case 1:

     printf("\nInput a number: ");

     scanf("%d",&n);

     printf("%d",-(n));

     break;

    case 0:

     exit(0);

    }

    }

    getch();

    return 0;

}

1. Write a program to convert even number into its upper nearest odd number using switch statement.

ANS:-

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

int main()

{

    int n,num;

    while(1)

    {

    printf("\n\n0. To exit ");

    printf("\n1. To convert even number into its upper nearest odd number");

    printf("\n\nInput your choice: ");

    scanf("%d",&num);

    switch(num)

    {

    case 1:

     printf("\nInput a even number: ");

     scanf("%d",&n);

     if(n%2==0)

     {

     printf("%d",n+1);

     break;

     }

     else

     {

     printf("Please enter a even number.");

     break;

     }

    case 0:

     exit(0);

    }

    }

    getch();

    return 0;

}

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

ANS:-

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

#include<math.h>

int main()

{

    float a,b,c,D,root1,root2;

    int n;

    while(1)

    {

    printf("\n\n1. To find roots of quadratic equation \n");

    printf("0. To exit\n\n ");

    scanf("%d",&n);

switch(n)

{

    case 1:

    printf("Enter cofficient of x^2: ");

    scanf("%f",&a);

    printf("Enter cofficient of x: ");

    scanf("%f",&b);

    printf("Enter constant term: ");

    scanf("%f",&c);

    D=b\*b-4\*a\*c;

    if(D>0)

    {

        root1=(-b+sqrt(D))/(2\*a);

        root2=(-b-sqrt(D))/(2\*a);

        printf("\nroot1 = %.1f \nroot2 = %.1f",root1,root2);

        break;

    }

    else if(D<0)

    {

        printf("roots are imaginary");

        break;

    }

    else

    {

    printf("roots are same and equal\nroot1 = %.1f",-b/2\*a);

    break;

    }

    case 0:

    exit(0);

}

}

    getch();

    return 0;

}