1. Use If-Else and write a program that reads an integer and determines and prints if the number is even or odd. (i.e. divisible by 2)

#include <stdio.h>

int main() {

    int number;

    printf("Enter an integer: ");

    scanf("%d", &number);

    if (number % 2 == 0) {

        printf("%d is even.\n", number);

    } else {

        printf("%d is odd.\n", number);

    }

    return 0;

}

Re-write the above program using a switch statement instead of an If-Else statement!

#include <stdio.h>

int main() {

    int number;

    printf("Enter an integer: ");

    scanf("%d", &number);

    switch (number % 2) {

        case 0:

            printf("%d is even.\n", number);

            break;

        case 1:

            printf("%d is odd.\n", number);

            break;

    }

    return 0;

}

1. Write a simple menu driven calculator to perform (+ - / \*) operations. (The program must display a menu to select the desired operator.)

#include <stdio.h>

int main() {

    int choice;

    float num1, num2, result;

    printf("Menu:\n");

    printf("1. Addition\n");

    printf("2. Subtraction\n");

    printf("3. Multiplication\n");

    printf("4. Division\n");

    printf("Enter your choice (1-4): ");

    scanf("%d", &choice);

    printf("Enter two numbers: ");

    scanf("%f %f", &num1, &num2);

    switch (choice) {

        case 1:

            result = num1 + num2;

            printf("Result: %.2f\n", result);

            break;

        case 2:

            result = num1 - num2;

            printf("Result: %.2f\n", result);

            break;

        case 3:

            result = num1 \* num2;

            printf("Result: %.2f\n", result);

            break;

        case 4:

            if (num2 != 0) {

                result = num1 / num2;

                printf("Result: %.2f\n", result);

            } else {

                printf("Error: Division by zero is not allowed.\n");

            }

            break;

        default:

            printf("Invalid choice.\n");

    }

}

1. Create a text-based, menu-driven program that allows the user to choose whether to calculate the circumference of a circle, the area of a circle or the volume of a sphere. The program should then input a radius from the user, perform the appropriate calculation and display the result.

#include <stdio.h>

#define PI 3.14159

int main() {

    int choice;

    float radius, result;

    printf("Menu:\n");

    printf("1. Calculate Circumference of a Circle\n");

    printf("2. Calculate Area of a Circle\n");

    printf("3. Calculate Volume of a Sphere\n");

    printf("Enter your choice (1-3): ");

    scanf("%d", &choice);

    printf("Enter the radius: ");

    scanf("%f", &radius);

    switch (choice) {

        case 1:

            result = 2 \* PI \* radius;

            printf("Circumference: %.2f\n", result);

            break;

        case 2:

            result = PI \* radius \* radius;

            printf("Area: %.2f\n", result);

            break;

        case 3:

            result = (4.0 / 3.0) \* PI \* radius \* radius \* radius;

            printf("Volume: %.2f\n", result);

            break;

        default:

            printf("Invalid choice.\n");

    }

    return 0;

}

1. Write a C program to read a character from the user and determine whether the given letter is vowel or not. (Use a switch statement which also includes ‘default’ state).

#include <stdio.h>

int main() {

    char vowal;

    printf("Enter a character: ");

    scanf("%c", &vowal);

    switch (vowal)

    {

        case 'a':

            printf("vowel\n");break;

        case 'e':

            printf("vowel\n");break;

        case 'i':

            printf("vowel\n");break;

        case 'o':

            printf("vowel\n");break;

        case 'u':

            printf("vowel\n");break;

        default:

            printf("not a vowel!\n");break;

}

}

1. Write a C program to enter month number and print total number of days in month using switch case. First assume that the given month belongs to a non-leap year.

#include <stdio.h>

int main() {

    int month;

    printf("Enter the month number (1-12): ");

    scanf("%d", &month);

    switch (month) {

        case 1:

            printf("January has 31 days.\n");break;

        case 2:

            printf("February has 28 days.\n");break;

        case 3:

            printf("March has 31 days.\n");break;

        case 4:

            printf("April has 30 days.\n");break;

        case 5:

            printf("May has 31 days.\n");break;

        case 6:

            printf("June has 30 days.\n");break;

        case 7:

            printf("July has 31 days.\n");break;

        case 8:

            printf("August has 31 days.\n");break;

        case 9:

            printf("September has 30 days.\n");break;

        case 10:

            printf("October has 31 days.\n");break;

        case 11:

            printf("November has 30 days.\n");break;

        case 12:

            printf("December has 31 days.\n");break;

        default:

            printf("Invalid month number.\n");break;

    }

    return 0;

}