

## Practical 04

Q1)

```
#include <stdio.h>

int main() {
    int number;

    printf("Enter an integer: ");
    scanf("%d", &number);

    if (number % 2 == 0) {
        printf("The number is even.\n");
    } else {
        printf("The number is odd.\n");
    }

    return 0;
}
```

Using Switch statement:

```
#include <stdio.h>

int main() {
    int number;

    printf("Enter an integer: ");
    scanf("%d", &number);

    switch (number % 2) {
        case 0:
            printf("The number is even.\n");
            break;
        case 1:
            printf("The number is odd.\n");
            break;
    }

    return 0;
}
```

```

        printf("The number is odd.\n");
        break;
    default:
        printf("Invalid number.\n");
        break;
    }

    return 0;
}

```

Q2)

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

```

int main() {
    int choice;
    double num1, num2;

    printf("Menu:\n");
    printf("1. Addition\n");
    printf("2. Subtraction\n");
    printf("3. Multiplication\n");
    printf("4. Division\n");
    printf("Enter your choice: ");
    scanf("%d", &choice);

    printf("Enter two numbers: ");
    scanf("%lf %lf", &num1, &num2);

    switch (choice) {
        case 1:
            printf("Result: %.2lf\n", num1 + num2);
            break;
        case 2:
            printf("Result: %.2lf\n", num1 - num2);
            break;
    }
}

```

```

    case 3:
        printf("Result: %.2lf\n", num1 * num2);
        break;
    case 4:
        if (num2 != 0) {
            printf("Result: %.2lf\n", num1 / num2);
        } else {
            printf("Error: Division by zero!\n");
        }
        break;
    default:
        printf("Invalid choice!\n");
        break;
}

return 0;
}

```

Q3)

```

#include <stdio.h>
#include <math.h>

```

```

#define PI 3.14159

```

```

int main() {
    int choice;
    double radius;

    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: ");
    scanf("%d", &choice);
}

```

```

printf("Enter the radius: ");
scanf("%lf", &radius);

switch (choice) {
    case 1:
        printf("Circumference: %.2lf\n", 2 * PI * radius);
        break;
    case 2:
        printf("Area: %.2lf\n", PI * pow(radius, 2));
        break;
    case 3:
        printf("Volume: %.2lf\n", (4.0 / 3.0) * PI * pow(radius, 3));
        break;
    default:
        printf("Invalid choice!\n");
        break;
}

return 0;
}

```

Q4)

```

#include <stdio.h>

int main() {
    char ch;

    printf("Enter a character: ");
    scanf(" %c", &ch);

    switch (ch) {
        case 'a':
        case 'e':
        case 'i':
        case 'o':

```

```

    case 'u':
    case 'A':
    case 'E':
    case 'I':
    case 'O':
    case 'U':
        printf("The character is a vowel.\n");
        break;
    default:
        printf("The character is not a vowel.\n");
        break;
}

return 0;
}

```

Q5) Program to determine the number of days in a given month:

```

#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 (non-leap year).\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;
}
```