

# Homework 2

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## EX1: Write C Program to Check Whether a Number is Even or Odd

### You should know those topics:

C Programming Operators

C Programming if, if..else and Nested if...else Statement

### The program idea

Numbers perfectly divisible by 2 are known even numbers and numbers which are not divisible by 2 are called odd numbers. This program takes an integer from user and checks whether that number is even or odd and displays the result.

### Output 1

```
Enter an integer you want to check: 25
25 is odd.
```

### Output 2

```
Enter an integer you want to check: 12
12 is even.
```

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## EX2: C Program to Check Vowel or Consonant

Alphabets a, e, i, o and u are known as vowels and all alphabets except these characters are known as consonants. This program asks user to enter a character and checks whether that character is vowel or not.

### Output 1

```
Enter an alphabet: i
i is a vowel.
```

### Output 2

```
Enter an alphabet: G
G is a consonant.
```

### EX3:C Program to Find the Largest Number Among Three Numbers

In this program user is asked to enter three numbers and this program will find the largest number among three numbers entered by user. This program can be solved in more than one way.

#### Output

```
Enter three numbers: 12.2
13.452
10.193
Largest number = 13.45
```

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### EX4: C Program to Check Whether a Number is Positive or Negative

This program takes a number from user and checks whether that number is either positive or negative or zero.

#### Output 1

```
Enter a number: 12.3
12.30 is positive.
```

#### Output 2

```
Enter a number: 0
You entered zero.
```

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## EX5: C Program to Check Whether a Character is an Alphabet or not

This program takes a character from user and checks whether that character is an alphabet or not.

### Output 1

```
Enter a character: *  
* is not an alphabet
```

### Output 2

```
Enter a character: K  
K is an alphabet
```

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## EX6: C Program to Calculate Sum of Natural Numbers

Positive integers 1, 2, 3, 4... are known as natural numbers. This program takes a positive integer from user( suppose user entered n ) then, this program displays the value of 1+2+3+....n.

### Output

```
Enter an integer: 100  
Sum = 5050
```

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## EX7: C Program to Find Factorial of a Number

For any positive number n, its factorial is given by:

factorial =  $1*2*3*4*...n$

If a number is negative, factorial does not exist and factorial of 0 is 1.

This program takes an integer from a user. If user enters negative integer, this program will display error message and if user enters non-negative integer, this program will display the factorial of that number.

### Output 1

```
Enter an integer: -5
Error!!! Factorial of negative number doesn't exist.
```

### Output 2

```
Enter an integer: 10
Factorial = 3628800
```

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## EX8: C Program to Make a Simple Calculator to Add, Subtract, Multiply or Divide Using switch...case

This program takes an arithmetic operator (+, -, \*, /) and two operands from an user and performs the operation on those two operands depending upon the operator entered by user.

### Output

```
Enter operator either + or - or * or divide : -
Enter two operands: 3.4
8.4
3.4 - 8.4 = -5.0
```