Example1

Write a C program to check whether an alphabet is vowel or consonant using if else. How to check vowels and consonants using if else in C programming. C Program to input a character from user and check whether it is vowel or consonant. Logic to check vowel or consonant in C programming.

Example

Input
Input character: a

Output

'a' is vowel

Example2

Write a C program to check whether a triangle is valid or not if angles are given using if else. How to check whether a triangle can be formed or not, if its angles are given using if else in C programming. Logic to check triangle validity if angles are given in C program.

Example
Input
Input first angle: 60
Input second angle: 30
Input third angle: 90

Output

The triangle is valid

Example3

Write a C program to input sides of a triangle and check whether a triangle is equilateral, scalene or isosceles triangle using if else. How to check whether a triangle is equilateral, scalene or isosceles triangle in C programming. Logic to classify triangles as equilateral, scalene or isosceles triangle if sides are given in C program.

Example
Input
Input first side: 30
Input second side: 30
Input third side: 30

Output

Triangle is equilateral triangle

Example4:

Write a C Program to input two angles from user and find third angle of the triangle. How to find all angles of a triangle if two angles are given by user using C programming. C program to calculate the third angle of a triangle if two angles are given.

ExampleInput
Enter first angle: 60
Enter second angle: 80

Output

Third angle = 40

Example5

Write a C program to find all roots of a quadratic equation using if else. How to find all roots of a quadratic equation using if else in C programming. Logic to find roots of quadratic equation in C programming.

Example
Input
Input a: 8
Input b: -4
Input c: -2

Output

Root1: 0.80
Root2: -0.30

Example6

Write a C program to input electricity unit charge and calculate the total electricity bill according to the given condition:

For	first	50	units	Rs.	0.50/unit
For	next	100	units	Rs.	0.75/unit
For	next	100	units	Rs.	1.20/unit
For	unit	above	250	Rs.	1.50/unit

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

How to calculate electricity bill using if else in C programming. Program to find electricity bill using if else in C. Logic to find net electricity bill in C program.

Example7

Write a C program to input principle, time and rate (P, T, R) from user and find Simple Interest. How to calculate simple interest in C programming. Logic to find simple interest in C program.

Example
Input
Enter principle: 1200
Enter time: 2
Enter rate: 5.4

Output

Simple Interest = 129.600006

Simple Interest formula

$$SI = \frac{P \times T \times R}{100}$$

where

P is the principle amount
T is the time
R is the rate

Example 8

Write a C program to input principle (amount), time and rate (P, T, R) and find Compound Interest. How to calculate compound interest in C programming. Logic to calculate compound interest in C program.

Example
Input
Enter principle (amount): 1200
Enter time: 2

Enter rate: 5.4

Output

Compound Interest = 1333.099243

Compound Interest formula

Formula to calculate compound interest annually is given by.

$$CI = P\left(1 + \frac{R}{100}\right)^T$$

Where,
P is principle amount
R is the rate and
T is the time span

Example9:

Write a C program to input week number(1-7) and print day of week name using switch case. C program to find week day name using switch case. How to find day name of week using switch case in C programming.

Example
Input
Input week number(1-7): 2

Output

Tuesday

Example 10

Write a C program to input month number and print total number of days in month using switch...case. C program to find total number of days in a month using switch...case. Logic to print number of days in a month using switch...case in C programming.

Example
Input
Input month number: 3

Output

Total number of days = 31

Example11

An automobile company manufactures both a two wheeler (TW) and a four wheeler (FW). A company manager wants to make the production of both types of vehicle according to the given data below:

- 1st data, Total number of vehicle (two-wheeler + four-wheeler)=v
- 2nd data, Total number of wheels = W

The task is to find how many two-wheelers as well as four-wheelers need to manufacture as per the given data.

Example :

Input :

- 200 -> Value of V
- 540   -> Value of W

Output :

- TW =130 FW=70

Explanation:

130+70 = 200 vehicles

(70*4)+(130*2)= 540 wheels

Constraints :

- 2<=W
- W%2=0
- V<W

Print "INVALID INPUT" , if inputs did not meet the constraints.

The input format for testing

The candidate has to write the code to accept two positive numbers separated by a new line.

- First Input line – Accept value of V.
- Second Input line- Accept value for W.

Example12

There is a JAR full of candies for sale at a mall counter. JAR has the capacity N, that is JAR can contain maximum N candies when JAR is full. At any point of time. JAR can have M number of Candies where M<=N. Candies are served to the customers. JAR is never remain empty as when last k candies are left. JAR if refilled with new candies in such a way that JAR get full.
Write a code to implement above scenario. Display JAR at counter with available number of candies. Input should be the number of candies one

customer can order at point of time. Update the JAR after each purchase and display JAR at Counter.

Output should give number of Candies sold and updated number of Candies in JAR.

If Input is more than candies in JAR, return: "INVALID INPUT"

Given,

N=10, where N is NUMBER OF CANDIES AVAILABLE

K =< 5, where k is number of minimum candies that must be inside JAR ever.

Example 1:(N = 10, k =< 5)

- **Input Value**
    - 3
- **Output Value**
    - NUMBER OF CANDIES SOLD : 3
    - NUMBER OF CANDIES AVAILABLE : 7

Example : (N=10, k<=5)

- **Input Value**
    - 0
- **Output Value**
    - INVALID INPUT
    - NUMBER OF CANDIES LEFT : 10

Example13

A washing machine works on the principle of Fuzzy System, the weight of clothes put inside it for washing is uncertain But based on weight measured by sensors, it decides time and water level which can be changed by menus given on the machine control area.

For low level water, the time estimate is 25 minutes, where approximately weight is between 2000 grams or any nonzero positive number below that.

For medium level water, the time estimate is 35 minutes, where approximately weight is between 2001 grams and 4000 grams.

For high level water, the time estimate is 45 minutes, where approximately weight is above 4000 grams.

Assume the capacity of machine is maximum 7000 grams

Where approximately weight is zero, time estimate is 0 minutes.

Write a function which takes a numeric weight in the range [0,7000] as input and produces estimated time as output is: "OVERLOADED", and for all other inputs, the output statement is

"INVALID INPUT".

Input should be in the form of integer value –

Output must have the following format –

Time Estimated: Minutes

Example:

- Input value

2000

- Output value

Time Estimated: 25 minutes

Example14

There are total n number of Monkeys sitting on the branches of a huge Tree. As travelers offer Bananas and Peanuts, the Monkeys jump down the Tree. If every Monkey can eat k Bananas and j Peanuts. If total m number of Bananas and p number of Peanuts are offered by travelers, calculate how many Monkeys remain on the Tree after some of them jumped down to eat.

At a time one Monkeys gets down and finishes eating and go to the other side of the road. The Monkey who climbed down does not climb up again after eating until the other Monkeys finish eating.

Monkey can either eat k Bananas or j Peanuts. If for last Monkey there are less than k Bananas left on the ground or less than j Peanuts left on the ground, only that Monkey can eat Bananas(<k) along with the Peanuts(<j).

Write code to take inputs as n, m, p, k, j and return the number of Monkeys left on the Tree.

   Where, n= Total no of Monkeys

     k= Number of eatable Bananas by Single Monkey (Monkey that jumped down last may get less than k Bananas)

     j = Number of eatable Peanuts by single Monkey(Monkey that jumped down last may get less than j Peanuts)

     m = Total number of Bananas

     p = Total number of Peanuts

Remember that the Monkeys always eat Bananas and Peanuts, so there is no possibility of k and j having a value zero

Example :
Input Values
20
2
3
12
12

Output Values
Number of Monkeys left on the tree:10

Example15

Checking if a given year is leap year or not

Explanation:

To check whether a year is leap or not

Step 1:

- We first divide the year by 4.
- If it is not divisible by 4 then it is not a leap year.
- If it is divisible by 4 leaving remainder 0

Step 2:

- We divide the year by 100
- **If it is not divisible by 100 then it is a leap year.**
- If it is divisible by 100 leaving remainder 0

Step 3:

- We divide the year by 400
- If it is not divisible by 400 then it is a leap year.
- If it is divisible by 400 leaving remainder 0