

## ✔ Day : Conditional Statements (4-8-2025)

1. Write a program to check if a number is positive, negative, or zero.

**Input:** A number n

**Process:**

If  $n > 0 \rightarrow$  positive

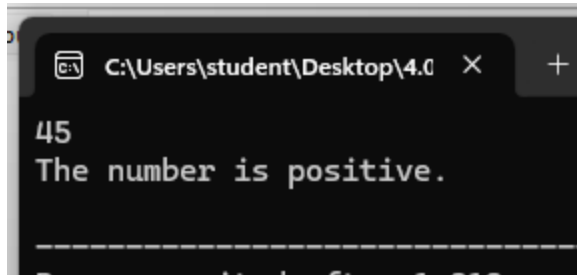
If  $n < 0 \rightarrow$  negative

Else  $\rightarrow$  zero

**Output:** Message indicating whether the number is positive, negative, or zero

```
#include <stdio.h>
int main()
{
    int num;
    scanf("%d", &num);
    if (num > 0)
        printf("The number is positive.\n");
    else if (num < 0)
        printf("The number is negative.\n");
    else
        printf("The number is zero.\n");

    return 0;
}
```

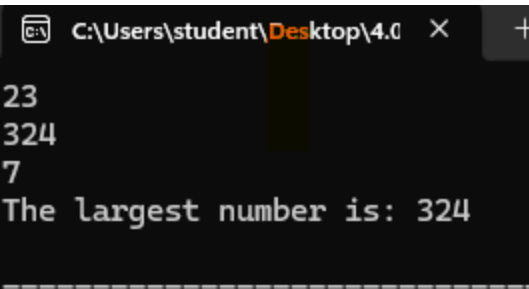


```
C:\Users\student\Desktop\4.0
45
The number is positive.
```

## 2. Write a program to find the largest among three numbers.

- ❑ **Input:** Three numbers a, b, c
- ❑ **Process:** Compare the numbers to find the largest using `if...else if...else`
- ❑ **Output:** The largest number

```
#include <stdio.h>
int main()
{
    int a, b, c;
    scanf("%d %d %d", &a, &b, &c);
    if (a >= b && a >= c)
        printf("The largest number is: %d\n", a);
    else if (b >= a && b >= c)
        printf("The largest number is: %d\n", b);
    else
        printf("The largest number is: %d\n", c);
    return 0;
}
```



```
C:\Users\student\Desktop\4.0
23
324
7
The largest number is: 324
```

### 3. Write a program to check if a year is a leap year.

**Input:** A year (integer)

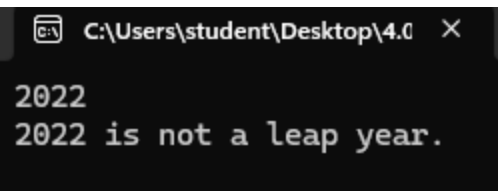
**Process:**

- A year is a leap year if:
  - It is divisible by 400, or
  - It is divisible by 4 and not divisible by 100

**Output:** Whether the year is a leap year or not

```
#include <stdio.h>

int main()
{
    int year;
    scanf("%d", &year);
    if ((year % 400 == 0) || (year % 4 == 0 && year % 100 != 0))
        printf("%d is a leap year.\n", year);
    else
        printf("%d is not a leap year.\n", year);
    return 0;
}
```



```
C:\Users\student\Desktop\4.0 X
2022
2022 is not a leap year.
```

```
#include <stdio.h>

int main() {
    char ch;
    printf("Enter a character: ");
    scanf(" %c", &ch);

    if ((ch >= 'A' && ch <= 'Z') || (ch >= 'a'
&& ch <= 'z'))
    {
        if (ch == 'a' || ch == 'e' || ch == 'i' || ch
== 'o' || ch == 'u' ||
            ch == 'A' || ch == 'E' || ch == 'I' ||
ch == 'O' || ch == 'U')
            printf("%c is a vowel.\n", ch);
        else
            printf("%c is a consonant.\n",ch);
    }
    else
    {
        printf("Invalid input. Please enter an
alphabet.\n");
    }

    return 0;
}
```

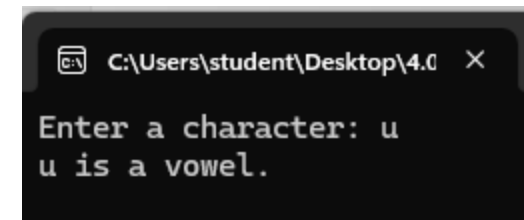
#### 4. Write a program to check whether a character is a vowel or consonant.

**Input: A character**

**Process:**

- **Convert character to lowercase (optional)**
- **Check if it is one of: 'a', 'e', 'i', 'o', 'u'**
- **If it's an alphabet but not a vowel → consonant**
- **If not an alphabet → invalid input**

**Output: Whether the character is a vowel, consonant, or invalid**



```
C:\Users\student\Desktop\4.0
Enter a character: u
u is a vowel.
```



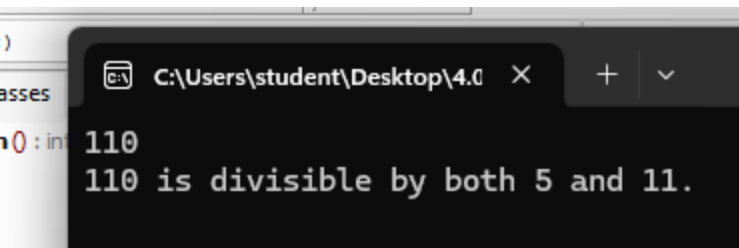
## 6. Write a program to check whether a number is divisible by 5 and 11.

**Input:** A number

**Process:** Check if the number is divisible by both 5 and 11 using the modulus operator %

**Output:** Display whether the number is divisible by both 5 and 11

```
#include <stdio.h>
int main()
{
    int number;
    scanf("%d", &number);
    if (number % 5 == 0 && number % 11 == 0)
    {
        printf("%d is divisible by both 5 and 11.\n", number);
    }
    else
    {
        printf("%d is NOT divisible by both 5 and 11.\n", number);
    }
    return 0;
}
```



```
C:\Users\student\Desktop\4.0
110
110 is divisible by both 5 and 11.
```

## 7. Write a program to find the absolute value of a number.

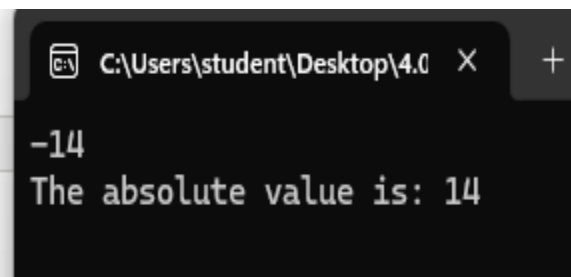
**Input:** A number (integer or float)

**Process:** Use the absolute value function or logic to convert negative numbers to positive

**Output:** Display the absolute value of the number

```
#include <stdio.h>
int main()
{
    int num, absValue;
    scanf("%d", &num);
    if (num < 0)
        absValue = -num;
    else
        absValue = num;
    printf("The absolute value is: %d\n", absValue);

    return 0;
}
```



```
C:\Users\student\Desktop\4.0 X +
-14
The absolute value is: 14
```

## 8. Write a menu-driven program to perform +, -, \*, / operations.

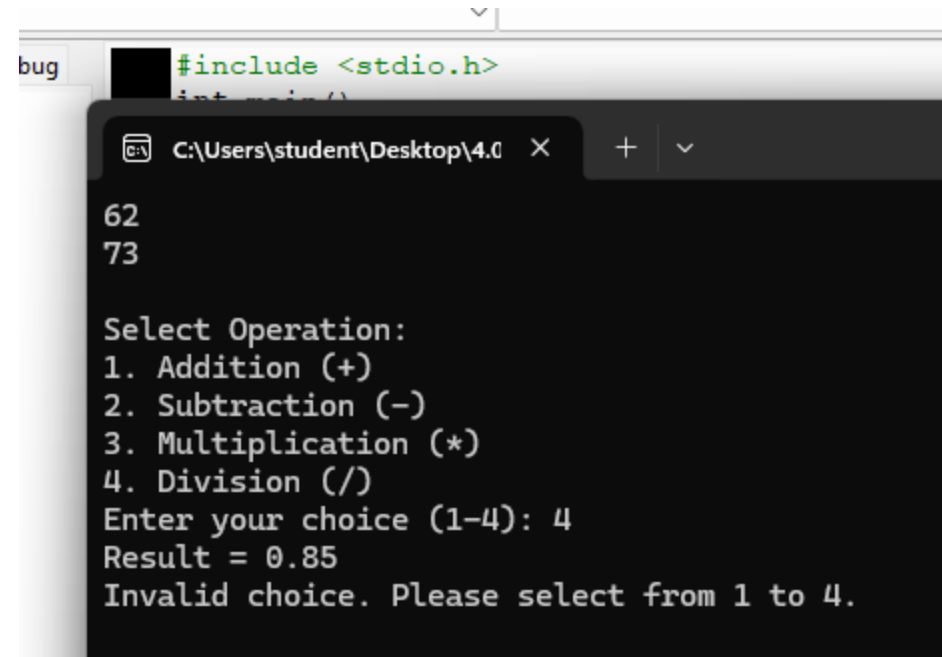
**Input:** Two numbers and choice of operation (+, -, \*, /)

**Process:** Perform the selected arithmetic operation using conditional checks

**Output:** Display the result of the operation

```
#include <stdio.h>

int main()
{
    float num1, num2, result;
    int choice;
    scanf("%f %f", &num1, &num2);
    printf("\nSelect Operation:\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);
    switch(choice)
    {
        case 1:
            result = num1 + num2;
        case 2:
            result = num1 - num2;
        case 3:
            result = num1 * num2;
        case 4:
            if(num2 != 0) {
                result = num1 / num2;
                printf("Result = %.2f\n", result);
            } else
            {
                printf("Error: Division by zero is not allowed.\n");
            }
        default:
            printf("Invalid choice. Please select from 1 to 4.\n");
    }
}
```



```
#include <stdio.h>
int main()
{
    62
    73

    Select Operation:
    1. Addition (+)
    2. Subtraction (-)
    3. Multiplication (*)
    4. Division (/)
    Enter your choice (1-4): 4
    Result = 0.85
    Invalid choice. Please select from 1 to 4.
```





## 10. Write a program to find the number of digits in a number.

**Input:** An integer number

**Process:** Convert the number to string (handle negative sign if present) and count the characters

**Output:** Display the count of digits

```
#include <stdio.h>
int main()
{
    int num, count = 0;
    scanf("%d", &num);
    if (num == 0)
        count = 1;
    else
    {
        while (num != 0) {
            num /= 10;
            count++;
        }
    }
    printf("Number of digits = %d\n", count);
    return 0;
}
```

