

1- Write a program that declares a variable i and initializes it with the ASCII value of 'A', then prints the value of i.

اكتب برنامجًا يعلن عن المتغير i ويقوم بتهيئته بقيمة ASCII الخاصة بـ 'A'، ثم يطبع قيمة i.

Output

65

Solution

```
//www.gammal.tech
#include<stdio.h>

int main() {
    // Declare a variable 'i' and initialize it with the ASCII value of 'A'
    int i = 'A';

    // Print the value of 'i'
    printf("%d\n", i);

    return 0;
}
```

2- Write a program that declares a character variable s and initializes it with the character 'A', then prints the value of s.

اكتب برنامجًا يعلن عن متغير الحرف s ويبدأه بالحرف 'A'، ثم يطبع قيمة s.

Output

A

Solution

```
//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare a character variable 's' and initialize it with the character 'A'
    char s = 'A';

    // Print the value of 's'
    printf("%c\n", s);

    return 0;
}
```

3- Write a program that declares a character variable s and initializes it with the character 'A'. Increment the value of s by 1 and print the updated value.

اكتب برنامجًا يعلن عن متغير الحرف s ويبدأه بالحرف 'A'. قم بزيادة قيمة s بمقدار 1 وطباعة القيمة المحدثة.

Output

B

Solution

```

//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare a character variable 's' and initialize it with the character 'A'
    char s = 'A';

    // Increment the value of 's' by 1
    s++;

    // Print the updated value of 's'
    printf("%c\n", s);

    return 0;
}
```

4- Write a program that prompts the user to enter their name, reads the input, and then prints a welcome message with their name.

اكتب برنامجًا يطلب المستخدم بإدخال اسمه، ويقرأ الإدخال، ثم يطبع رسالة ترحيب باسمه.

Input

```
Enter your name: AbdulRahman
```

Output

```
Welcome, AbdulRahman!
```

Solution

```

//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare a character array to store the name
    char s[50];

    // Prompt the user to enter their name
    printf("Enter your name: ");

    // Read the name from the user input
    scanf("%s", s);

    // Print a welcome message with the entered name
    printf("\nWelcome, %s!\n", s);

    return 0;
}
```

5- Write a program that prompts the user to enter their first name and last name, reads the input, and then prints a welcome message with their full name.

اكتب برنامجًا يطلب المستخدم بإدخال اسمه الأول واسم العائلة، ويقرأ الإدخال، ثم يطبع رسالة ترحيب باسمه الكامل.

Input

```
Enter first name: Ahmed
Enter last name: Mohammed
```

Output

```
Welcome, Ahmed Mohammed!
```

Solution

```

//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare character arrays to store the first name and last name
    char s1[20], s2[20];

    // Prompt the user to enter their first name
    printf("Enter first name: ");
    scanf("%s", s1);

    // Prompt the user to enter their last name
    printf("Enter last name: ");
    scanf("%s", s2);

    // Print a welcome message with the entered full name
    printf("\nWelcome, %s %s!\n", s1, s2);

    return 0;
}
```

6- Write a program that prompts the user to enter their first name and age, reads the input, and then prints a welcome message with their name and age.

اكتب برنامجًا يطلب المستخدم بإدخال اسمه الأول وعمره، ويقرأ الإدخال، ثم يطبع رسالة ترحيب تتضمن اسمه وعمره.

Input

```
Enter first name: AbdulRahman
Enter Your age: 20
```

Output

```
Welcome, AbdulRahman!
Your age: 20
```

Solution

```
//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare a character array to store the first name
    char s1[20];

    // Declare a variable to store the age
    int age;

    // Prompt the user to enter their first name
    printf("Enter first name: ");
    scanf("%s", s1);

    // Prompt the user to enter their age
    printf("Enter Your age: ");
    scanf("%d", &age);

    // Print a welcome message with the entered name and age
    printf("\nWelcome, %s!", s1);
    printf("\nYour age: %d\n", age);

    return 0;
}
```

7- Write a program that prompts the user to enter their first name and age, reads the input, and then prints a welcome message with their name only if the age is greater than 18. If the age is 18 or younger, print only the age.

اكتب برنامجًا يطلب المستخدم بإدخال اسمه الأول وعمره، ويقرأ الإدخال، ثم يطبع رسالة ترحيب باسمه فقط إذا كان العمر أكبر من 18 عامًا. وإذا كان العمر 18 عامًا أو أقل، فاطبع العمر فقط.

Input


```
Enter first name: Ahmed
Enter Your age: 12
```

Output

Your age: 12

Solution

```


//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare a character array to store the first name
    char s1[20];

    // Declare a variable to store the age
    int age;

    // Prompt the user to enter their first name
    printf("Enter first name: ");
    scanf("%s", s1);

    // Prompt the user to enter their age
    printf("Enter Your age: ");
    scanf("%d", &age);

    // Check if the age is greater than 18
    if (age > 18) {
        // Print a welcome message with the entered name
        printf("\nWelcome, %s!\n", s1);
    } else {
        // Print only the age if it is 18 or younger
        printf("\nYour age: %d\n", age);
    }

    return 0;
}
```

8- Write a program to perform basic arithmetic operations (addition, subtraction, multiplication, division) on two integers entered by the user. Prompt the user to enter two integers and the desired operation, perform the calculation, and display the result. Ensure proper handling of division by zero.

كتابة برنامج لإجراء العمليات الحسابية الأساسية (الجمع، الطرح، الضرب، القسمة) على عددين صحيحين يدخلهما المستخدم. اطلب من المستخدم إدخال عددين صحيحين والعملية المطلوبة، وإجراء الحساب وعرض النتيجة. التأكد من التعامل السليم مع القسمة على الصفر.

Input

```
Enter first integer: 5
Enter second integer: 6
Enter operation (+, -, *, /): *
```

Output

```
Result: 30
```


Solution

```

//www.gammal.tech

#include<stdio.h>

int main() {
    // Declare variables for input and result
    int num1, num2, result;
    char operation;

    // Prompt the user to enter two integers
    printf("Enter first integer: ");
    scanf("%d", &num1);

    printf("Enter second integer: ");
    scanf("%d", &num2);

    // Prompt the user to enter the desired operation
    printf("Enter operation (+, -, *, /): ");
    scanf(" %c", &operation);

    // Perform the calculation based on the entered operation
    switch (operation) {
        case '+':
            result = num1 + num2;
            break;
        case '-':
            result = num1 - num2;
            break;
        case '*':
            result = num1 * num2;
            break;
        case '/':
            // Check for division by zero
            if (num2 != 0) {
                result = num1 / num2;
            } else {
                printf("Error: Division by zero is not allowed.\n");
                return 1; // Exit the program with an error code
            }
            break;
        default:
            printf("Error: Invalid operation.\n");
            return 1; // Exit the program with an error code
    }

    // Display the result
    printf("Result: %d\n", result);

    return 0;
}
```

9- Write a program that prompts the user to enter their name, stores it in a character array, and then prints the first three characters of the entered name. Note that the name must contain at least 3 characters.

اكتب برنامجًا يطلب المستخدم بإدخال اسمه، ويخزنه في array أحرف، ثم يطبع الأحرف الثلاثة الأولى من الاسم الذي تم إدخاله. لاحظ أن الاسم يجب أن يحتوي على 3 أحرف على الأقل.

Input

```
Enter your name: mohammed
```

Output

```
First three characters: m o h
```

Solution

```
//www.gammal.tech
#include<stdio.h>

int main() {
    // Declare a character array to store the name
    char s1[20];

    // Prompt the user to enter their name
    printf("Enter your name: ");
    scanf("%s", s1);

    // Print the first three characters of the entered name
    printf("\nFirst three characters: ");
    for (int i = 0; i < 3 ; i++) {
        printf("%c ", s1[i]);
    }

    printf("\n");

    return 0;
}
```

10- Write a program that prompts the user to enter his first and last name separately, stores them in different character arrays, and then prints the first three letters of each name. Note that the name must contain at least 3 characters.

اكتب برنامجًا يطلب من المستخدم إدخال اسمه الأول واسم العائلة بشكل منفصل، ويخزنهما في مصفوفات أحرف مختلفة، ثم يطبع الأحرف الثلاثة الأولى من كل اسم. لاحظ أن الاسم يجب أن يحتوي على 3 أحرف على الأقل.

Input

```
Enter your first name: ahmed
Enter your last name: mohammed
```

Output

```
First three characters of the first name: a h m
First three characters of the last name: m o h
```

Solution

```
//www.gammal.tech
#include<stdio.h>

int main() {
    // Declare character arrays to store the first and last name
    char firstName[20], lastName[20];

    // Prompt the user to enter their first name
    printf("Enter your first name: ");
    scanf("%s", firstName);

    // Prompt the user to enter their last name
    printf("Enter your last name: ");
    scanf("%s", lastName);

    // Print the first three characters of the entered first name
    printf("\nFirst three characters of the first name: ");
    for (int i = 0; i < 3 ; i++) {
        printf("%c ", firstName[i]);
    }

    // Print the first three characters of the entered last name
    printf("\nFirst three characters of the last name: ");
    for (int i = 0; i < 3 ; i++) {
        printf("%c ", lastName[i]);
    }

    printf("\n");

    return 0;
}
```