
1- Write a program that initializes a character array with the value "Gammal Tech" and prints the entire string.

اكتب برنامجًا يقوم بتهيئة مصفوفة أحرف بقيمة "Gammal Tech" وطباعة السلسلة بأكملها.

Output

```
Name: Gammal Tech
```

Solution

```c
//www.gammal.tech

#include<stdio.h>

int main() {
    // Initialize a character array with the value "Gammal Tech"
    char name[20] = "Gammal Tech";

    // Print the entire string
    printf("Name: %s\n", name);

    return 0;
}
```

2- Write a C program that initializes two character arrays, name1 with the value "Gammal" and name2 with the value "Tech". Print both strings together.

اكتب برنامج C يقوم بتهيئة مصفوفتين من الأحرف، name1 بالقيمة "Gammal" وname2 بالقيمة "Tech". اطبع كلا السلسلتين معًا.

Output

```
Full Name: Gammal Tech
```

Solution

```c
//www.gammal.tech

#include<stdio.h>

int main() {
    // Initialize two character arrays with values
    char name1[20] = "Gammal";
    char name2[20] = "Tech";

    // Print both strings together
    printf("Full Name: %s %s\n", name1, name2);

    return 0;
}
```

3- Write a program that initializes a character array name1 with the value "Gammal\0Tech" (including the null terminator \0). Print the string using the printf function.

اكتب برنامجًا يقوم بتهيئة اسم array name1 بالقيمة "Gammal\0Tech" (بما في ذلك الفاصل الفارغ \0). اطبع السلسلة باستخدام printf.

Output

```
Name: Gammal
```

Solution

```c
//www.gammal.tech

#include<stdio.h>

int main() {
    // Initialize a character array with a null-terminated string
    char name1[20] = "Gammal\0Tech";

    // Print the string
    printf(" Name: %s \n", name1);

    return 0;
}
```

4- Write a program that initializes two character arrays, name1 with the value "Gammal\0Tech" and name2 with the value "Tech\0Hello". Print both strings stored in name1 and name2 using the printf function.

اكتب برنامجًا يقوم بتهيئة مصفوفتين من الأحرف، name1 بالقيمة "Gammal\0Tech" وname2 بالقيمة "Tech\0Hello". اطبع كلا السلسلتين المخزنتين في name1 وname2 باستخدام printf.

Output

```
Name1: Gammal
Name2: Tech
```

Solution

```c
//www.gammal.tech

#include<stdio.h>

int main() {
    // Initialize character arrays with null-terminated strings
    char name1[20] = "Gammal\0Tech", name2[20] = "Tech\0Hello";

    // Print the strings stored in name1 and name2
    printf("Name1: %s\n", name1);
    printf("Name2: %s\n", name2);

    return 0;
}
```

5- Write a program that initializes a character array name1 with the value "GammalTech" and prints each character in the array using a loop until the null terminator is encountered.

اكتب برنامجًا يقوم بتهيئة اسم مصفوفة name1 بالقيمة "GammalTech" وطباعة كل حرف في المصفوفة باستخدام loop حتى '\0'.

Output

```
GammalTech
```

Solution

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

int main() {
    // Initialize character array with a null-terminated string
    char name1[20] = "GammalTech";

    // Print each character in the array using a loop
    for (int i = 0; name1[i] != '\0'; i++) {
        printf("%c", name1[i]);
    }

    return 0;
}
```

6- Write a program that initializes a character array name1 with the value "GammalTech" and calculates the length of the string (excluding the null terminator) using a loop. Print the calculated length.

اكتب برنامجًا يقوم بتهيئة اسم مصفوفة name1 بالقيمة "GammalTech" ويحسب طول السلسلة باستخدام حلقة. طباعة عدد الحروف .

Output

```
Length of the string: 10
```

Solution

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

int main() {
    // Initialize character array with a null-terminated string
    char name1[20] = "GammalTech";
    int counter = 0;

    // Calculate the length of the string using a loop
    for (int i = 0; name1[i] != '\0'; i++) {
        counter++;
    }

    // Print the calculated length
    printf("Length of the string: %d\n", counter);

    return 0;
}
```

7- Write a program that initializes a character array name1 with the value "GammalTech" and calculates the number of occurrences of the character 'm' in the string using a loop. Print the calculated count.

اكتب برنامجًا يقوم بتهيئة مصفوفة name1 بقيمة "GammalTech" ويحسب عدد تكرارات الحرف "m" في السلسلة باستخدام حلقة. طباعة العدد المحسوب.

Output

```
Count of 'm' in the string: 2
```

Solution

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

int main() {
    // Initialize character array with a null-terminated string
    char name1[20] = "GammalTech";
    int counter = 0;

    // Calculate the number of occurrences of 'm' using a loop
    for (int i = 0; name1[i] != '\0'; i++) {
        if (name1[i] == 'm') {
            counter++;
        }
    }

    // Print the calculated count
    printf("Count of 'm' in the string: %d\n", counter);

    return 0;
}
```

8- Write a program that initializes a character array name1 with the value "GammalTech" and calculates the number of occurrences of both 'm' and 'a' in the string using a loop. Print the calculated counts for both characters.

اكتب برنامجًا يقوم بتهيئة اسم مصفوفة name1 بالقيمة "GammalTech" ويحسب عدد تكرارات كل من "m" و"a" في السلسلة باستخدام حلقة. طباعة الأعداد المحسوبة لكلا الحرفين.

Output

```
Count of 'm' in the string: 2
Count of 'a' in the string: 2
```

Solution

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

int main() {
    // Initialize character array with a null-terminated string
    char name1[20] = "GammalTech";
    int counterForM = 0, counterForA = 0;

    // Calculate the number of occurrences of 'm' and 'a' using a loop
    for (int i = 0; name1[i] != '\0'; i++) {
        if (name1[i] == 'm') {
            counterForM++;
        }
        if (name1[i] == 'a') {
            counterForA++;
        }
    }

    // Print the calculated counts
    printf("Count of 'm' in the string: %d\n", counterForM);
    printf("Count of 'a' in the string: %d\n", counterForA);

    return 0;
}
```

9- Write a program that initializes a character array name1 with the value "Hello Gammal Tech" and calculates the length of the string excluding spaces using a loop. Print the calculated length.

اكتب برنامجًا يقوم بتهيئة اسم مصفوفة name1 بالقيمة "Hello Gammal Tech" ويحسب طول السلسلة باستثناء المسافات باستخدام حلقة. طباعة الطول المحسوب.

Output

```
Length of the string excluding spaces: 15
```

Solution

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

int main() {
    // Initialize character array with a null-terminated string
    char name1[20] = "Hello Gammal Tech";
    int counter = 0;

    // Calculate the length of the string excluding spaces using a loop
    for (int i = 0; name1[i] != '\0'; i++) {
        if (name1[i] != ' ') {
            counter++;
        }
    }

    // Print the calculated length
    printf("Length of the string excluding spaces: %d\n", counter);

    return 0;
}
```

10- Write a program that initializes a character array name1 with the value "Hello Gammal Tech" and prints the first 5 characters of the string.

اكتب برنامجًا يقوم بتهيئة اسم مصفوفة name1 بالقيمة "Hello Gammal Tech" وطباعة أول 5 أحرف من السلسلة.

Output

```
Hello
```

Solution

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

int main() {
    // Initialize character array with a null-terminated string
    char name1[20] = "Hello Gammal Tech";

    // Print the first 5 characters of the string
    for (int i = 0; i < 5; i++) {
        printf("%c", name1[i]);
    }

    return 0;
}
```