

## Assignment 2 | 5th January 2021

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For any doubts regarding the assignment, ask questions in the [Data Structures and Algorithms](#) Group in the Community.

Submit Assignments by **12th January 2021 11:59 PM**

Assignment Submit Form: <https://forms.gle/NNBMrBwhTFKhuP5h> **6**

**Submit assignments in Appropriate Dropdowns.**

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### Question 1

Write a program to print the following pattern

1

2\*2

3\*3\*3

4\*4\*4\*4

**Answer**

```
#include <stdio.h>

int main()
{
    int i, j;
    for(i = 1; i <= 4; i++)
    {
        for(j = 1; j <= i; j++)
        {
            if(j == 1)
            {
                printf("%d", i);
            } else {
                printf("*%d", i);
            }
        }
        printf("\n");
    }
    return 0;
}
```

**Question 2**

Write a program to print the following pattern

01

101

0101

10101

### **Answer**

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int i, j;
```

```
    for(i = 1; i <= 5; i++)
```

```
    {
```

```
        for(j = 1; j <= i; j++)
```

```
        {
```

```
            if(i == j)
```

```
            {
```

```
                printf("1");
```

```
            } else if((i-j) % 2) {
```

```
                printf("0");
```

```
            } else {
```

```
        printf("1");  
  
    }  
  
}  
  
printf("\n");  
  
}  
  
return 0;  
  
}
```

### **Question 3**

Write the similarity and difference between an array name and a pointer variable.

### **Answer**

Difference is

An array is linear data structure that stores same type of data elements and array name is just an identifier.

But pointer variable is a variable which stores the address of another variable and to make a variable as a pointer we use a reference operator (\*) before it. Example - \*ptr

Similarity is

In C, array name is also a pointer that points to first element of the array. While passing an array to function as an argument, we pass the base address of the array like a pointer.

## FAQs

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### **Q. When do I submit the Assignments and how?**

- A. The assignments for the week should be submitted by 12th January 2021 i.e. Tuesday 11:59 PM IST.
- B. You need to submit the answers in Document Format

### **Q. Where do I get class links for the next session?**

- A. All sessions will be Live on the Learning Management System. [Click here](#) for your classroom on Learning management system
- B. It will be also updated in the Community Group in the pinned post.

### **Q. I have some doubt, who do I ask?**

- A. Post your Queries on the community, someone will help you out.

**Q. How can we know if my assignment is verified or not? And is it successfully submitted or not?**

A. You will receive a mail for your successful submission.