

Assignment 2 | 5th January 2021

Question 1

Write a program to print the following pattern

1

2*2

3*3*3

4*4*4*4

Answer: -

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

Question 2

Write a program to print the following pattern

1

01

101

0101

10101

Answer: -

```
int i, j;
int count = 1;
for (i = 1; i <= 5; i++) {
    printf("\n");
    for (j = 1; j <= i; j++) {
        printf("%d", count % 2);
        count++;
    }
    if (i % 2 == 0)
        count = 1;
    else
        count = 0;
}
```

Question 3

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

Similarity and Difference between array and pointer: -

Array and pointer are not quite the same as one another. following I am mentioning a few points which depict the difference between array and pointer.

1. An array is a collection of elements of similar data types while a pointer is a variable that store the location.
2. Array component store at bordering memory area while pointer can store each address in turn.

3. At the point when we utilize the sizeof the operator with the array it gives the absolute number of bytes utilized by the elements though the pointer just gives the size of the pointer.
4. Array static in nature implies we were unable to resize the size of the array though with a pointer we can change the size of distributed memory anytime. However, with the new compiler, we can utilize the variable for the size of the array yet the estimation of the variable ought to be the integral positive number.