**ASSIGNMENT 2**

**NAME: Swara Dhananjay Joshi**

**1.Write a program to print following pattern**

**1**

**2\*2**

**3\*3\*3**

**4\*4\*4\*4**

#include<stdio.h>

int main()

{

int num,i,k;

printf("Enter the number of rows:");

scanf("%d",&num);

for (i = 1; i <= num; i++)

{

for (k = 1; k <= i; k++)

{

if(k>1&&k<=i)

{

printf("\*");

}

printf("%d",i);

if(i==k)

{

printf("\n");

}

}

}

return 0;

}

**2.Write a program to print following pattern**

**1**

**01**

**101**

**0101**

**10101**

#include<stdio.h>

int main()

{

int i,j,num;

printf("\n Enter the value of n:");

scanf("%d",&num);

for(i=0;i<=num;i++)

{

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

{

if((i+j)%2==0)

{

printf(" 0");

}

else

{

printf(" 1");

}

}

printf("\n");

}

return 0;

}

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

|  |  |
| --- | --- |
| Array | Pointer |
| 1. Stores the value of the variable of same type | 1. Stores the address of another variable of same datatype. |
| 1. An array of pointer can be generated | 1. A pointer to an array can be generated |
| 1. A normal array stores the values of variable and pointer array stores the address of variable | 3 pointers are specially designed to store the address of variable |
| 1. An array can store the number of elements mentioned in the size of variables | 4 A pointer variable can store the address of only one variable at a time |