# Gebze Teknik Üniversitesi

# Bilgisayar Mühendisliği Bölümü

# BİL107 - Bilgisayar Bilimlerine Giriş Laboratuvarı

**Lab Content:** Arrays in C - special data structure which is used for list of values, manipulation of memory space.

How to create arrays:

```
int arr[] = { 10, 20, 30, 40};
```

```
int my_array2[5];

my_array2[0] =1;

my_array2[1] = 2;

my_array2[2] = 3;

 my_array2[3] = 4;

my_array2[4] = 5;
```

Printing the array content using loops:

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

    printf("arr [%d]: %d", i, arr [i]);

}
```

Random number generation:

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

int main()
{
   int i;

   printf(" Random Numbers are: \n");
   for (i = 0; i <5; i++)
   {
      printf(" %d", rand());
   }
    return 0;
}
```

**Fonksiyon Örneği:**

```c
#include <stdio.h>
int square(int id);
int main(void)
{
  int id;
  id = 3;
  printf("%d sayısının karesi: %d", id, square (id));
  return 0;
}
int square(int id)
{
  return id*id;
}
```

Course Exercise:

1. Get 5 value from user and fill array with them.

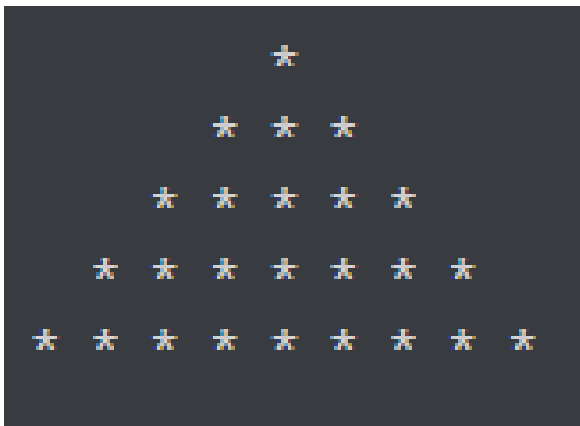**Tasks:**

**1. C program to draw a perpendicular triangle with *.**

**Ex:**

\*

\*\*

\*\*\*

\*\*\*\*

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**2. C program to draw pyramid with \*.**

**Ex – height 5:**



**Hint:** According to bottom line, find the number of blank characters at the first line(how many blank is at right side and how many blank is at left side?). If height of pyramid is 4, then bottom line has got 7 asterix ((4-1)*2+1).

First line has got 8 blank (5-1 left side and 5-1 right side) characters and one asterix at the middle.

**3. C program to print all the composite numbers from 2 to a certain number entered by user.**

**Enter a number:10**

**4 is composite**

**6 is composite**

**8 is composite**

**9 is composite**

**10 is composite**

**Hint:** A composite number (bileşik sayı) is a positive integer that can be formed by multiplying two smaller positive integers.