

## Day - 1

### C Programming – Star Patterns and String Length

#### 1. Print a Single Star

Code:

```
#include <stdio.h>
int main() {
    printf("*");
    return 0;
}
```

**Output:**

\*

#### 2. Print 5 Stars in a Row

Code:

```
#include <stdio.h>
int main() {
    for(int i=1;i<=5;i++){
        printf("* ");
    }
    return 0;
}
```

**Output:**

\* \* \* \* \*

### 3. Print 5 Stars in a Column

Code:

```
#include <stdio.h>
int main() {
    for(int i=1;i<=5;i++){
        printf("*\n");
    }
    return 0;
}
```

**Output:**

```
*
```

```
*
```

```
*
```

```
*
```

```
*
```

### 4. Square of Stars (Dynamic)

Code:

```
#include <stdio.h>
int main() {
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;i++){
        for(int j=1;j<=n;j++){
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

**Input:** 3

**Output:**

```
* * *
```

```
* * *
```

```
* * *
```

## 5. Rectangle of Stars (Dynamic)

Code:

```
#include <stdio.h>
int main() {
    int r,c;
    scanf("%d %d",&r,&c);
    for(int i=1;i<=r;i++){
        for(int j=1;j<=c;j++){
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

**Input:** 3 5

**Output:**

```
* * * * *
* * * * *
* * * * *
```

## 6. Right Angle Triangle

Code:

```
#include <stdio.h>
int main() {
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;i++){
        for(int j=1;j<=i;j++){
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

**Input:** 4

**Output:**

```
*
```

```
* *
```

\* \* \*  
\* \* \* \*

## 7. Decreasing Triangle

Code:

```
#include <stdio.h>
int main() {
    int n;
    scanf("%d",&n);
    for(int i=n;i>=1;i--){
        for(int j=1;j<=i;j++){
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

**Input:** 4

**Output:**

\* \* \* \*  
\* \* \*  
\* \*  
\*

## 8. Increasing Triangle

Code:

```
#include <stdio.h>
int main() {
    int n;
    printf("Enter number of rows: ");
    scanf("%d", &n);

    for(int i = 1; i <= n; i++) {
        for(int j = 1; j <= i; j++) {
            printf("* ");
        }
        printf("\n");
    }
}
```

```
    }
    return 0;
}
```

**Input:** 5

**Output**

```
*
```

  

```
* *
```

  

```
* * *
```

  

```
* * * *
```

  

```
* * * * *
```

## 9. Length of String

Code:

```
#include <stdio.h>
int main() {
    char str[100];
    int len=0;
    gets(str);
    while(str[len]!='\0'){
        len++;
    }
    printf("Length = %d",len);
    return 0;
}
```

**Input:** Hello

**Output:**

Length = 5