

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