Pattern 4

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```
{
int n, col, row;
printf("Enter n = ");
scanf("%d", &n);
for(row=1 ; row<=n ; row++){
    for(col=1 ; col<=row ; col++){
        printf("%d ", col);
    }
    printf("\n");
}
}
```

input n = 5
output =
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

type → 2

```
{int n, col, row;
printf("Enter n = ");
scanf("%d", &n);
for(row=1 ; row<=n ; row++){
    for(col=1 ; col<=row ; col++){
        printf("%d ", row);}
    printf("\n");}
}
```

input = 5
output =
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5

1
1 0
1 0 1
1 0 1 0

Pattern → 31

input = 9
output =
1
1 0
1 0 1
1 0 1 0

```
{ int n, row, col;
printf("Enter n = ");
scanf("%d", &n);
for (row = 1 ; row <= n ; row++) {
    for (col = 1 ; col <= row ; col++) {
        printf("%d ", col % 2); }
    printf("\n"); } }
```

Pattern → 4

1
0 0
1 1 1

input = 5
output =
1
0 0
1 1 1
0 0 0 0
1 1 1 1 1

```
{ int n, row, col;
printf("Enter n = ");
scanf("%d", &n);
for (row = 1 ; row <= n ; row++) {
    for (col = 1 ; col <= row ; col++) {
        printf("%d ", row % 2); }
    printf("\n"); } }
```

A
A B
A B C

1 2 3 4
1 2 3
1 2
1

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pattern 5

অর আর বাকি printf এ change

```
printf("%c ", col + 64);
```

input = 4
output = A
A B
A B C
A B C D

pattern – 6

অর আর বাকি printf এ change

```
printf("%c ", row + 64);
```

input = 4
output =
A
B B
C C C
D D D D

pattern – 7

অর আর বাকি print এ change

```
printf("* ");
```

input = 5
output =
*
* *
* * *
* * * *
* * * * *

pattern – 8

```
{ int n, row, col;
printf("Enter n = ");
scanf("%d", &n);
for(row = n; row >= 1; row--){
for(col = 1; col <= row; col++){
printf("%d ", col); }
printf("\n"); } }
```

input n = 5
output =
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1

```
1
1 2
1 2 3
1 2
1
```

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Pattern → 9

```
{int n, row, col;
printf("Enter n = ");
scanf("%d", &d);

* for(row=1; row<=n; row++){
upper     for(col=1; col<=row; col++){
            printf("%d ", col);}
          printf("\n");}

* for(row=n-1; row>=1; row--){
lower       for(col=1; col<=row; col++){
            printf("%d", col)}
          printf("\n")}
}
```

input → 5

output =

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

```
      1        4 3 2 1
    2 1          3 2 1
  3 2 1            2 1
4 3 2 1              1
```


pattern → 10

input = 5

output =

```
        1
      2 1
    3 2 1
  4 3 2 1
5 4 3 2 1
```

```
{
int n, row, col ;
printf ("Enter n= ");
scanf ("%d", &n);

for( row=1; row<=n; row++){
    for(col=1; col<= n-row; col++){
        printf(" ");}
    for (col=1; col<=row; col++){
        printf("%d", col)}
    printf("\n");}
}
```

pattern – 11

উপরের সব সেম শুধু condition change হবে ।

input = 5

output

```
5 4 3 2 1
  4 3 2 1
    3 2 1
      2 1
        1
```

```
for(row=n; row>=1; row--){
    for(col=1; col<=n-row; col++){
        printf(" ");}
for(col=1; col<=row; col++){
        printf("%d", col);}
    printf("\n"); }
```

```
1
2 1
3 2 1
2 1
1
```

Pattern→12

input n = 4

output =

```
1
2 1
3 2 1
4 3 2 1
3 2 1
2 1
1
```

```
#include<stdio.h>
int main(){
int n, row, col;
printf("Enter n=");
scanf("%d", &n);

/* upper */
for(row=1; row<=n; row++){
for(col=1; col<=n-row; col++){
printf(" ");}
for(col=1; col<=row; col++){
printf("%d ", col);}
printf("\n");}

/* lower */
for(row=n-1; row>=1; row--){
for(col=1; col<=n-row; col++){
printf(" ");}
for(col=1; col<=row; col++){
printf("%d ", col);}
printf("\n");}
}
```

pyramid

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



```
{
  int n, row, col;
  printf (" Enter n: ");
  scanf ("%d", &n);

  for (row=1; row<=n; row++){
     for (col=1; col<=n-row; col++){
        printf ("  ");}
     for ( col=1; col<=2*row-1; col++){
        printf ("%d", col);}
        printf ("\n");}
}
```

input = 5

output =

```
        1
      2 1 2
    3 2 1 2 3
  4 3 2 1 2 3 4
5 4 3 2 1 2 3 4 5
```

उल्टा pyramid

अब फिर कुछ condition change

```
for (row=n; row>=1; row--){
  for(col=1; col<=n-row; col++){
     printf ("  ");}
  for( col=1; col<=2*row-1; col++){
     printf ("%d", col);}
     printf ("\n");}
```

input = 5

output =

```
5 4 3 2 1 2 3 4 5
  4 3 2 1 2 3 4
    3 2 1 2 3
      2 1 2
        1
```

or

```
3 2 1 2 3
  2 1 2
    1
```

Rectangle ~~star~~ shape

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

```
{
int n, row, col;
printf (" Enter n: ");
scanf (" %d", &n);

for (row=1; row<=n; row++){
    for (col = 1; col <= n; col ++){
        if (row==1 || row==n || col==1 || col==n){
            printf ("* ");}
        else{
            printf ("  ");}}
    printf ("\n"); }
```

input 5
output →

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

Triangle shape

সব ঠিক তেমন আছে শুধু if condition change

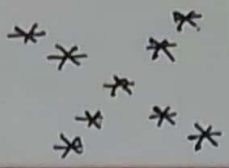
```
if ( row==n || col==1 || row==col)
```

input → 5
output →

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

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

X star pattern



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condition change

```
{
int n, row, col;
printf ("Enter n = ");
scanf ("%d", &n);
for (row = 1; row <= n; row++){
   for (col = 1; col <= n; col++){
      if ( col == row || row + col == n+1){
         printf("* ");}
      else{
         printf (" ");}
      printf("\n");}
}
```

input = 7

output

Floyd's Triangle.

```
{
int row, col, n, count=0;
for (row = 1 ; row <= n; row++){
   for( col = 1; col <= row ; col++){
      printf ("%d ", ++count ); }
   printf ("\n"); }
}
```

input = 4

output

1
2 3
4 5 6
7 8 9 10

```
    1
  1 2 1
1 2 3 2 1
1 2 3 4 3 2 1
```

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```
{
int row, col, n;
for(row=1; row<=n; row++){
  for(col=1; col<=n-row; col++){
    printf(" ");
  for(col=1; col<=row; col++){
    printf("%d", col);}
  for(col=row-1; col>=1; col--){
    printf("%d", col);}
  printf("\n");}}
}
```