

Q.1 Write a Program to print the below pattern using nested for loop.

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

Ans:

// Online C compiler to run C program online

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

```
int main() {
    for(int i=5;i>=1;i--){
        for(int j=5;j>=1;j--){
            if(i+j<=6){
                printf("%d",j);
            }else{
                printf(" ");
            }
        }
        printf("\n");
    }
}
```

```
    return 0;
```

```
}
```

o/p:

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

=== Code Execution Successful ===

Q.2 Write a Program to print the below pattern using nested for loop.

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

1 2 3 4 5

Ans:

// Online C compiler to run C program online

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

```
int main() {  
    for(int i=1;i<=5;i++){  
        for(int j=1;j<=5;j++){  
            if(i+j>=6){  
                printf("%d",j);  
            }else{  
                printf(" ");  
            }  
        }  
        printf("\n");  
    }  
}
```

```
    return 0;
```

```
}
```

o/p:

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

=== Code Execution Successful ===

Q.3 Write a Program to print the below pattern using nested for loop.

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

Ans:

// Online C compiler to run C program online

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

```
int main() {  
    for(int i=5;i>=1;i--){  
        for(int j=5;j>=1;j--){  
            if(i+j<=6){  
                printf("%d",i);  
  
                }else{  
                    printf(" ");  
                }  
        }  
        printf("\n");  
    }  
  
    return 0;  
}
```

o/p:

```
5  
44  
333  
2222  
11111
```

=== Code Execution Successful ===

Q.4 Write a Program to print the below pattern using nested for loop.

```
1 0 1 0 1  
0 1 0 1  
1 0 1  
0 1  
1
```

Ans:

// Online C compiler to run C program online

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

```
int main() {  
    int i, j;
```

```

for (i = 0; i < 5; i++) {
    for (j = 0; j < i; j++) {
        printf(" ");
    }

    for (j = i; j < 5; j++) {
        if(j%2==0){
            printf("1 ");
        }else{
            printf("0 ");
        }
    }

    printf("\n");
}
return 0;
}

```

o/p:

```

1 0 1 0 1
0 1 0 1
1 0 1
0 1
1

```

=== Code Execution Successful ===

Q.5 Write a Program to print the below pattern using nested for loop.

```

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

```

Ans:// Online C compiler to run C program online
#include <stdio.h>

```

int main() {
    int i, j, k;

```

```

    for(i =5; i >=1; --i) {
        for(k = 5; k >=i; k--) {
            printf(" ");
        }
        for(j = i; j >= 1; --j) {
            printf("%d ", j);
        }
        printf("\n");
    }

    return 0;
}

```

o/p:

```

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

```

=== Code Execution Successful ===

Q.6 Write a Program to print the below pattern using nested for loop.

```

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

```

Ans:

// Online C compiler to run C program online
#include <stdio.h>

```

int main() {
    int i,j,k;
    for (i=1;i<=5;i++) {
        for(k=i;k>=1;k--){
            printf(" ");
        }
    }
}

```

```

for (j=5;j>=i;--j) {
printf("%d ", j);
}
printf("\n");
}
return 0;
}

```

o/p:

```

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

```

=== Code Execution Successful ===

Q.7 Write a Program to print the below pattern using nested for loop.

```

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

```

Ans:

// Online C compiler to run C program online
#include <stdio.h>

```

int main() {
    int i,j,k;
    for (i=5;i>=1;i--){
    for (j=1;j<=i;j++){
    printf("%d",j);
    }
    for(k=5;k>i;k--){
    printf(" ");
    }
    for (k=i;k>=1;k--){
    printf("%d",k);
    }
    printf("\n");
}

```

```
}
```

```
return 0;
```

```
}
```

o/p:

```
1234554321
1234 4321
123 321
12 21
1 1
```

=== Code Execution Successful ===

Q.8 Write a Program to print the below pattern using nested for loop.

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

Ans:

// Online C compiler to run C program online

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

```
int main(){
```

```
int i,j,k,l;
```

```
for(i=5;i>=1;i--){
```

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

```
printf("%d",j);
```

```
}
```

```
for(k=5;k>i;k--){
```

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

```
}
```

```
for(l=i;l>=1;l--){
```

```
printf("%d",l);
```

```

}
printf("\n");
}
for(i=1;i<=5;i++){
for(j=1;j<=i;j++){
printf("%d",j);
}
for(j=i;j<=4;j++){
printf(" ");
}
for(j=i;j>=1;j--){
printf("%d",j);
}

if(j!=1){
printf(" ");
}
}
printf("\n");
}
return 0;
}

```

o/p:

```

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

```

=== Code Execution Successful ===

Q.9 Write a Program to print the below pattern using nested for loop.

```

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

```



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

Ans:

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

```
int main() {
    int i, j;
    for (i = 5; i >= 1; i--) {
        for (j = 1; j <= i; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }
    for (i = 1; i <= 5; i++) {
        for (j = 1; j <= i; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }
    return 0;
}
```

o/p:

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

=== Code Execution Successful ===

Q.10 Write a Program to print the below pattern using nested for loop.

```

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

```

Ans:

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

```

int main(){
    int i, j, k, l;
    for (i = 1; i <= 5; i++) {
        for (k = i; k < 5; k++) {
            printf(" ");
        }
        for (j = 1; j <= i; j++) {
            printf("%2d ", j);
        }
        for (l = i - 1; l >= 1; l--) {
            printf("%2d ", l);
        }
        printf("\n");
    }
    return 0;
}

```

o/p:

```

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

```

=== Code Execution Successful ===

.11 Write a Program to print the below pattern using nested for loop.

```

    *
  ***
 *****
*****
*****

```

Ans:

```
#include <stdio.h>
int main() {
    int i, j, k;
    for (i = 1; i <= 5; i++) {
        for (k = 1; k <= 5 - i; k++) {
            printf(" ");
        }
        for (j = 1; j <= i * 2 - 1; j++) {
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

o/p:

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

=== Code Execution Successful ===