

BOX-1. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
4	* * * *
	* * * *
	* * * *
	* * * *
2	* *
	* *

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}
```

BOX-2. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	1 1 1 1 1
	2 2 2 2 2
	3 3 3 3 3
	4 4 4 4 4
	5 5 5 5 5
2	1 1
	2 2

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            printf("%d ", row);
        }
        printf("\n");
    }
    return 0;
}
```

BOX-3. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

5	A A A A A
	B B B B B
	C C C C C
	D D D D D
	E E E E E

2	A A
	B B

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            printf("%c ", row+64);
        }
        printf("\n");
    }
    return 0;
}
```

BOX-4. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	A B C D E A B C D E A B C D E A B C D E A B C D E
2	A B A B

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            printf("%c ", col+64);
        }
        printf("\n");
    }
    return 0;
}
```

BOX-5(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

// Printing numbers in descending order.

Sample Input	Sample Output
3	1 2 3 1 2 3 1 2 3

```

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

```

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            printf("%d ", col);
        }
        printf("\n");
    }
    return 0;
}

```

BOX-5(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

// Printing numbers in ascending order.

Sample Input	Sample Output
-----	-----
3	3 2 1 3 2 1 3 2 1
5	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=n;col>=1;col--)
        {
            printf("%d ", col);
        }
        printf("\n");
    }
    return 0;
}

```

BOX-6. WAP that will print a pattern based on the input integer n. Please see the sample input output.(Here underscore(_) indicates space.)

// Printing stars(*) at the odd positions.

Sample Input	Sample Output
-----	-----
3	* _ * * _ * * _ *

5

```

* _ *
* _ *
* _ *
* _ *
* _ *

```

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            if(col%2 != 0)
                printf("*");
            else
                printf("_");
        }
        printf("\n");
    }
    return 0;
}

```

BOX-6(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.(Here underscore(_) indicates space.)
 // Printing odd numbers at the odd positions in descending order.

Sample Input	Sample Output
3	1_3 1_3 1_3
5	1_3_5 1_3_5 1_3_5 1_3_5 1_3_5

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            if(col%2 != 0)
                printf("%d", col);
            else
                printf("_");
        }
        printf("\n");
    }
    return 0;
}

```

BOX-6(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.
 // Printing odd numbers at the odd positions in ascending order.

Sample Input	Sample Output
--------------	---------------

3

3_1
3_1
3_1

5

5_3_1
5_3_1
5_3_1
5_3_1
5_3_1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=n;col>=1;col--)
        {
            if(col%2 != 0)
                printf("%d", col);
            else
                printf("_");
        }
        printf("\n");
    }
    return 0;
}
```

BOX-7. WAP that will print a pattern based on the input integer n. Please see the sample input output.(Here underscore(_) indicates space.)
// Printing stars(*) at the even positions.

Sample Input	Sample Output
--------------	---------------

3

*
*
*

5

**_
**_
**_
**_
**_

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            if(col%2 == 0)
                printf("*");
            else
                printf("_");
        }
        printf("\n");
    }
    return 0;
}
```

```
}
```

BOX-7(a). WAP that will print a pattern based on the input integer n. Please see the sample input output. (Here underscore(_) indicates space.)

// Printing even numbers at the even positions in descending order.

Sample Input	Sample Output
-----	-----
3	_2_ _2_ _2_
-----	-----
5	_2_4_ _2_4_ _2_4_ _2_4_ _2_4_

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            if(col%2 == 0)
                printf("%d", col);
            else
                printf("_");
        }
        printf("\n");
    }
    return 0;
}
```

BOX-7(b). WAP that will print a pattern based on the input integer n. Please see the sample input output. (Here underscore(_) indicates space.)

// Printing even numbers at the even positions in ascending order.

Sample Input	Sample Output
-----	-----
3	_2_ _2_ _2_
-----	-----
5	_4_2_ _4_2_ _4_2_ _4_2_ _4_2_

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=n;col>=1;col--)
        {
            if(col%2 == 0)
                printf("%d",col);
        }
    }
}
```

```

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

```

BOX-8. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	<pre> 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 </pre>
3	<pre> 1 0 1 0 1 0 1 0 1 </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n;col++)
        {
            if(col%2 != 0)
                printf("1 ");
            else
                printf("0 ");
        }
        printf("\n");
    }
    return 0;
}

```

BOX-9. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	<pre> 1 2 3 2 3 4 3 4 5 </pre>
4	<pre> 1 2 3 4 2 3 4 5 3 4 5 6 4 5 6 7 </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=row;col<=n+row;col++)

```

```

    {
        printf("%d ", col);
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-1.1: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

3	<pre> * * * * * * </pre>
---	--------------------------

5	<pre> * * * * * * * * * * * * * * * </pre>
---	--

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-1.2(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

3	<pre> 1 1 2 1 2 3 </pre>
---	--------------------------

4	<pre> 1 1 2 1 2 3 1 2 3 4 </pre>
---	----------------------------------

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);

```



```

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

```

Half Pyramid-1.2(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	A A B A B C

4	A A B A B C A B C D

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("%c ", col+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-1.3(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 2 1 3 2 1

4	1 2 1 3 2 1 4 3 2 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=row;col>=1;col--)
        {

```

```

        printf("%d ", col);
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-1.3(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
----- 3	A B A C B A -----
4	A B A C B A D C B A

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=row;col>=1;col--)
        {
            printf("%c ", col+64);
        }
        printf("\n");
    }
return 0;
}

```

Half Pyramid-1.4(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
----- 3	1 2 2 3 3 3 -----
4	1 2 2 3 3 3 4 4 4 4

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", row);
        }
        printf("\n");
    }
}

```

```
return 0;
}
```

Half Pyramid-1.4(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	A B B C C C
4	A B B C C C D D D D

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("%c ", row+64);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-1.5(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 1 0 1 0 1
4	1 1 0 1 0 1 1 0 1 0

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            if(col%2 != 0)
                printf("1 ");
            else
                printf("0 ");
        }
        printf("\n");
    }
    return 0;
}
```

```
}
```

Half Pyramid-1.5(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 0 0 1 1 1

4	1 0 0 1 1 1 0 0 0 0

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            if(row%2 != 0)
                printf("1 ");
            else
                printf("0 ");
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-1.6: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 2 4 3 6 9

4	1 2 4 3 6 9 4 8 12 16

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", row*col);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-1.7(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

// Floyd's Triangle.

Sample Input	Sample Output
--------------	---------------

3	1 2 3 4 5 6
---	-------------------

4	1 2 3 4 5 6 7 8 9 10
---	-------------------------------

```
#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", ++count);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-1.7(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

3	A B C D E F
---	-------------------

4	A B C D E F G H I J
---	------------------------------

```
#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=row;col++)
        {
            printf("%c ", ++count+64);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-1.8: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 2 3 3 4 5
4	1 2 3 3 4 5 4 5 6 7

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=row;col<=row+row-1;col++)
        {
            printf("%d",col);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-1.9: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 3 2 3 2 1
4	4 4 3 4 3 2 4 3 2 1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=n;col>=n-row+1;col--)
        {
            printf("%d",col);
        }
        printf("\n");
    }
    return 0;
}
```

```
-----
-----
-----
-----
-----
```

Half Pyramid-2.1: WAP that will print a pattern based on the input integer n. Please see

the sample input output.

Sample Input	Sample Output
5	* * * * * * * * * * * * * * *
2	* * *

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-2.2(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 2 3 1 2 1
4	1 2 3 4 1 2 3 1 2 1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", col);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-2.2(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

3	A B C
	A B
	A

4	A B C D
	A B C
	A B
	A

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%c ", col+64);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-2.3(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 2 1 2 1 1
4	4 3 2 1 3 2 1 2 1 1

```
#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=row;col>=1;col--)
        {
            printf("%d ", col);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-2.3(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	C B A B A A

4	D C B A
	C B A
	B A
	A

```
#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=row;col>=1;col--)
        {
            printf("%c ", col+64);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-2.4(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	3 3 3 2 2 1
-----	-----
4	4 4 4 4 3 3 3 2 2 1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", row);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-2.4(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	C C C B B A
-----	-----
4	D D D D C C C B B A

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%c ", row+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-2.5(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 0 1 1 0 1
-----	-----
4	1 0 1 0 1 0 1 1 0 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            if(col%2 != 0)
                printf("1 ");
            else
                printf("0 ");
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-2.5(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 1 1 0 0 1
-----	-----
4	0 0 0 0 1 1 1 0 0 1

```

#include <stdio.h>

```

```

int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            if(row%2 != 0)
                printf("1 ");
            else
                printf("0 ");
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-2.6: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	3 6 9 2 4 1
-----	-----
4	4 8 12 16 3 6 9 2 4 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", row*col);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-2.7(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 2 3 4 5 6
-----	-----
4	1 2 3 4 5 6 7 8 9 10

```

#include <stdio.h>
int main()

```

```

{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%d ", ++count);
        }
        printf("\n");
    }
}
return 0;
}

```

Half Pyramid-2.7(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	A B C D E F
4	A B C D E F G H I J

```

#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=row;col++)
        {
            printf("%c ", ++count+64);
        }
        printf("\n");
    }
}
return 0;
}

```

Half Pyramid-2.8: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 4 5 2 3 1
4	4 5 6 7 3 4 5 2 3 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);

```

```

for(row=n;row>=1;row--)
{
    for(col=row;col<=row+row-1;col++)
    {
        printf("%d ", col);
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-2.9: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 2 1 3 2 3
4	4 3 2 1 4 3 2 4 3 4

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=n;col>=n-row+1;col--)
        {
            printf("%d ", col);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.1: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	* ** ***
5	* ** *** **** *****

```

#include <stdio.h>
int main()
{

```

```

int n,row,col;
printf("Enter a value for 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("*");
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-3.2(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 12 123

4	1 12 123 1234

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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");
    }
    return 0;
}

```

Half Pyramid-3.2(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	A A B A B C

4	A A B A B C A B C D

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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("%c", col+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.3(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 2 1 3 2 1
4	1 2 1 3 2 1 4 3 2 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=row;col>=1;col--)
        {
            printf("%d", col);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.3(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	A B A C B A
4	A

```

        B A
      C B A
    D C B A

```

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=row;col>=1;col--)
        {
            printf("%c", col+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.4(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	<pre> 1 2 2 3 3 3 </pre>
4	<pre> 1 2 2 3 3 3 4 4 4 4 </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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", row);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.4(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------


```

3
      A
    B B
  C C C

```

```

4
      A
    B B
  C C C
D D D D

```

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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("%c", row+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.5(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

3	1 1 0 1 0 1
---	-------------------

4	1 1 0 1 0 1 1 0 1 0
---	------------------------------

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            if(col%2 != 0)
                printf("1");
            else
                printf("0");
        }
        printf("\n");
    }
    return 0;
}

```

```
}
```

Half Pyramid-3.5(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 0 0 1 1 1
4	1 0 0 1 1 1 0 0 0 0

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            if(row%2 != 0)
                printf("1");
            else
                printf("0");
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-3.6: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 2 4 3 6 9
4	1 2 4 3 6 9 4 8 12 16

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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", row*col);
}
printf("\n");
}
return 0;
}

```

Half Pyramid-3.7(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

// Floyd's Triangle.

Sample Input	Sample Output
-----	-----
3	1 2 3 4 5 6
-----	-----
4	1 2 3 4 5 6 7 8 9 10

```

#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for 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", ++count);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.7(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	A B C D E F
-----	-----
4	A B C D E F G H I J

```

#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for 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("%c", ++count+64);
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-3.8: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 2 3 3 4 5
-----	-----
4	1 2 3 3 4 5 4 5 6 7

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=row;col<=row+row-1;col++)
        {
            printf("%d", col);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-3.9: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	3 3 2 3 2 1
-----	-----
4	4 4 3 4 3 2 4 3 2 1

```

#include <stdio.h>
int main()
{

```

```

int n,row,col;
printf("Enter a value for N:");
scanf("%d", &n);
for(row=1;row<=n;row++)
{
    for(col=1;col<=n-row;col++)
    {
        printf(" ");
    }
    for(col=n;col>=n-row+1;col--)
    {
        printf("%d", col);
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-4.1: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	<pre> * * * * * * * * * * * * * * * </pre>
2	<pre> * * * </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-4.2(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	<pre> 1 2 3 1 2 </pre>

```

          1
-----
      4      1 2 3 4
            1 2 3
            1 2
            1

```

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    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");
    }
    return 0;
}

```

Half Pyramid-4.2(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	A B C A B A
4	A B C D A B C A B A

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            printf("%c", col+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-4.3(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 2 1 2 1 1
4	4 3 2 1 3 2 1 2 1 1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=row;col>=1;col--)
        {
            printf("%d", col);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-4.3(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	C B A B A A
4	D C B A C B A B A A

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=row;col>=1;col--)
        {
            printf("%c", col+64);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-4.4(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 3 3 2 2 1
4	4 4 4 4 3 3 3 2 2 1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            printf("%d", row);
        }
        printf("\n");
    }
    return 0;
}
```

Half Pyramid-4.4(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	C C C B B A
4	D D D D C C C B B A

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            printf("%c", row+64);
        }
        printf("\n");
    }
}
```



```

}
return 0;
}

```

Half Pyramid-4.5(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 0 1 1 0 1

4	1 0 1 0 1 0 1 1 0 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            if(col%2 != 0)
                printf("1");
            else
                printf("0");
        }
        printf("\n");
    }
return 0;
}

```

Half Pyramid-4.5(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
3	1 1 1 0 0 1

4	0 0 0 0 1 1 1 0 0 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
    }
}

```

```

    }
    for(col=1;col<=row;col++)
    {
        if(row%2 != 0)
            printf("1");
        else
            printf("0");
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-4.6: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 6 9 2 4 1
4	4 8 12 16 3 6 9 2 4 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            printf("%d", row*col);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-4.7(a): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	1 2 3 4 5 6
4	1 2 3 4 5 6 7 8 9 10

```

#include <stdio.h>
int main()
{
    int n,row,col,count=0;

```

```

printf("Enter a value for N:");
scanf("%d", &n);
for(row=n;row>=1;row--)
{
    for(col=1;col<=n-row;col++)
    {
        printf(" ");
    }
    for(col=1;col<=row;col++)
    {
        printf("%d", ++count);
    }
    printf("\n");
}
return 0;
}

```

Half Pyramid-4.7(b): WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	A B C D E F
4	A B C D E F G H I J

```

#include <stdio.h>
int main()
{
    int n,row,col,count=0;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=row;col++)
        {
            printf("%c", ++count+64);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-4.8: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	3 4 5 2 3 1
4	4 5 6 7 3 4 5 2 3 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=row;col<=row+row-1;col++)
        {
            printf("%d", col);
        }
        printf("\n");
    }
    return 0;
}

```

Half Pyramid-4.9: WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
3	<pre> 3 2 1 3 2 3 </pre>
4	<pre> 4 3 2 1 4 3 2 4 3 4 </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=n;col>=n-row+1;col--)
        {
            printf("%d", col);
        }
        printf("\n");
    }
    return 0;
}

```

```

-----
-----
-----
-----
-----

```

Pyramid-1. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
--------------	---------------

```

-----
5
-----
          *
        ***
       *****
      *******
     *********
-----
3
-----
          *
        ***
       *****

```

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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("*");
        }
        printf("\n");
    }
    return 0;
}

```

Pyramid-2(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
<pre> ----- 5 ----- </pre>	<pre> ----- 1 123 12345 1234567 123456789 ----- </pre>
<pre> ----- 3 ----- </pre>	<pre> ----- 1 123 12345 ----- </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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");
    }
    return 0;
}

```

```
}
```

Pyramid-2(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	A ABC ABCDE ABCDEF ABCDEFGH ABCDEFGH
3	A ABC ABCDE

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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("%c", col+64);
        }
        printf("\n");
    }
    return 0;
}
```

Pyramid-3(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	1 222 33333 4444444 55555555
3	1 222 33333

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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", row);
    }
    printf("\n");
}
return 0;
}

```

Pyramid-3(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
----- 5 -----	----- A BBB CCCCC DDDDDDD EEEEEEEEEE -----
----- 3 -----	----- A BBB CCCCC -----

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for 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("%c", row+64);
        }
        printf("\n");
    }
    return 0;
}

```

```

-----
-----
-----
-----
-----

```

Reverse Pyramid-1. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
----- 5 -----	----- ***** ***** ***** *** * -----
----- 3 -----	----- ***** *** * -----

```

#include <stdio.h>

```

```

int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("*");
        }
        printf("\n");
    }
    return 0;
}

```

Reverse Pyramid-2(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
5	123456789 1234567 12345 123 1
-----	-----
3	12345 123 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    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");
    }
    return 0;
}

```

Reverse Pyramid-2(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
5	ABCDEFGHI ABCDEFG ABCDE ABC A

3

ABCDE
ABC
A

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("%c", col+64);
        }
        printf("\n");
    }
    return 0;
}
```

Reverse Pyramid-3(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input

Sample Output

5

55555555
4444444
33333
222
1

3

33333
222
1

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("%d", row);
        }
        printf("\n");
    }
    return 0;
}
```

Reverse Pyramid-3(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input

Sample Output

-----	-----
5	EEEEEEEEEE DDDDDDDD CCCCC BBB A
-----	-----
3	CCCCC BBB A

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=n;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("%c", row+64);
        }
        printf("\n");
    }
    return 0;
}
```

```
-----
-----
-----
-----
-----
-----
```

Diamond-1. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
5	* *** ***** ***** ***** ***** ***** *** *
-----	-----
3	* *** ***** *** *

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

```

// Print Pyramid
for(row=1;row<=n;row++)
{
    for(col=1;col<=n-row;col++)
    {
        printf(" ");
    }
    for(col=1;col<=2*row-1;col++)
    {
        printf("*");
    }
    printf("\n");
}

// Print Reverse Pyramid
for(row=n-1;row>=1;row--)
{
    for(col=1;col<=n-row;col++)
    {
        printf(" ");
    }
    for(col=1;col<=2*row-1;col++)
    {
        printf("*");
    }
    printf("\n");
}

return 0;
}

```

Diamond-2(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
5	1 123 12345 1234567 123456789 1234567 12345 123 1
-----	-----
3	1 123 12345 123 1

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);

    // Print Pyramid
    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");
}

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

return 0;
}

```

Diamond-2(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
5	A ABC ABCDE ABCDEFG ABCDEFGHI ABCDEFG ABCDE ABC A
-----	-----
3	A ABC ABCDE ABC A

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);

    // Print Pyramid
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("%c", col+64);
        }
        printf("\n");
    }
}

```

```
// Print Reverse Pyramid
for(row=n-1;row>=1;row--)
{
    for(col=1;col<=n-row;col++)
    {
        printf(" ");
    }
    for(col=1;col<=2*row-1;col++)
    {
        printf("%c", col+64);
    }
    printf("\n");
}

return 0;
}
```

Diamond-3(a). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
-----	-----
5	<pre> 1 222 33333 4444444 555555555 4444444 33333 222 1</pre>
-----	-----
3	<pre> 1 222 33333 222 1</pre>

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

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

    // Print Reverse Pyramid
    for(row=n-1;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
    }
}
```

```

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

return 0;
}

```

Diamond-3(b). WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	<pre> A BBB CCCCC DDDDDDD EEEEEEEE DDDDDDD CCCCC BBB A </pre>
3	<pre> A BBB CCCCC BBB A </pre>

```

#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);

    // Print Pyramid
    for(row=1;row<=n;row++)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("%c", row+64);
        }
        printf("\n");
    }

    // Print Reverse Pyramid
    for(row=n-1;row>=1;row--)
    {
        for(col=1;col<=n-row;col++)
        {
            printf(" ");
        }
        for(col=1;col<=2*row-1;col++)
        {
            printf("%c", row+64);
        }
        printf("\n");
    }
}

```

```
return 0;
}
```

Mix-1. WAP that will print a pattern based on the input integer n. Please see the sample input output. (Here underscore(_) indicates space.)

Sample Input	Sample Output
--------------	---------------

4

```
1__1
12__21
123__321
1234321
```

3

```
1__1
12__21
12321
```

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row=1; row<=n; row++)
    {
        // Prints first part of pattern
        for(col=1; col<=row && col<=n ; col++)
        {
            printf("%d", col);
        }
        // Prints spaces between two parts
        for(col=row*2; col<=n*2-1; col++)
        {
            printf(" ");
        }
        // Prints second part of the pattern
        for(col=row; col>=1; col--)
        {
            printf("%d", col);
        }

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

Mix-2. WAP that will print a pattern based on the input integer n. Please see the sample input output. (Here underscore(_) indicates space.)

Sample Input	Sample Output
--------------	---------------

5

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

3

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

```

#include <stdio.h>
int main()
{
    int n, row, col;
    printf("Enter a value for N:");
    scanf("%d",&n);

    for(row=1; row<=n; row++){
        printf("*");
    }
    printf("\n");

    for(row=1; row<=n/2; row++)
    {
        printf("*");

        for(col=2; col<n; col++)
        {
            printf(" ");
        }
        printf("*\n");

        for(col=1; col<=n; col++)
        {
            printf("*");
        }

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

```

Mix-3. WAP that will print a pattern based on the input integer n. Please see the sample input output. (Here underscore(_) indicates space.)

Sample Input

9

Sample Output

```

      _ $ _
      _ $ $ _
      _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ $ $ $ $ $ $ $
      _ $ _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ $ $ _
      _ $ _

```

13

```

      _ $ _
      _ $ $ _
      _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ $ $ $ $ $ $ $ $ $
      _ $ _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ _ $ _ $ _
      _ $ _ $ _
      _ $ _

```

```

#include <stdio.h>
int main()
{
    int row, col, n;
    scanf("%d", &n); // 'n' must be odd
}

```



```

int num1 = n / 2 * 3;
for(row = 0; row < n; row++)
{
for(col = 0; col < n; col++)
{
// center horizontal, center vertical, upper left diagonal, bottom left diagonal, upper
right diagonal, bottom right diagonal
if(row == n / 2 || col == n / 2 || row + col == n / 2 || row - col == n / 2 || col - row
== n / 2 || row + col == num1)
printf("$");
else
printf("_");
}
printf("\n");
}
return 0;
}

```

Alphabet-1. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	<pre> H H H H H H H H H H H H H </pre>
7	<pre> H H H H H H H H H H H H H H H H H H H </pre>

```

#include <stdio.h>
int main()
{
int n,row,col;
printf("Enter a value for N:");
scanf("%d", &n);
for(row = 1; row<=n; row++)
{
for (col = 1; col <=n; col++)
{
if(col==1 || col==n || row==n/2+1)
printf("H");
else
printf(" ");
}

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

```

Alphabet-2. WAP that will print a pattern based on the input integer n. Please see the

sample input output.(Here underscore(_) indicates space.)

Sample Input	Sample Output
5	<pre> * _ * * _ * - _ - * _ * _ - _ - * _ * * _ *</pre>
7	<pre> * _ _ _ * * _ _ _ * - _ - * _ _ _ * _ _ _ - _ - * _ _ _ * _ _ _ - _ - * _ _ _ * * _ _ _ *</pre>

```
#include <stdio.h>
int main()
{
    int n,row,col;
    printf("Enter a value for N:");
    scanf("%d", &n);
    for(row = 1; row<=n; row++)
    {
        for (col = 1; col <=n; col++)
        {
            if(row==col || row+col==n+1)
                printf("*");
            else
                printf("_");
        }

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

Alphabet-3. WAP that will print a pattern based on the input integer n. Please see the sample input output.

Sample Input	Sample Output
5	<pre>ZZZZZ Z Z Z ZZZZZ</pre>
7	<pre>ZZZZZZZ Z Z Z Z Z ZZZZZZZ</pre>

```
#include <stdio.h>
int main()
{
    int n, row, col;
    printf("Enter a value for N:");
    scanf("%d",&n);
    for(row=1; row<=n; row++)
    {
```

```
for(col=n; col>=1; col--)  
{  
    if(row==1 || row==n || row==col)  
        printf("Z");  
    else  
        printf(" ");  
}  
printf("\n");  
}  
return 0;  
}
```


