

will start at 9:02 pm

L7 - Java
Loops Extra Class
Returns

RECAP

1. Submitting on LeetCode
2. Print all primes from 1 to N
3. Check whether a given number is a power of 2 or not.
4. HCF of 2 given numbers (hint)



More Practice today.

Last official class on loops.

Square Star Pattern

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

N = 5

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

N = 4

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

```
for (int st = 1; st <= N; ++st)
    System.out.print(" * ");
```

Rhombus Star Pattern

→ 0 1 2 3 4
N = 5

0 *****
1 ↓ *****
2 ↓↓ *****
3 ↓↓↓ *****
4 ↓↓↓↓ *****

N = 4

N_2 4

*

* * *

* * * * *

* * * * *

$N=5$

$\text{row} \quad \text{stars} \quad \text{spaces}$
 4 1 - - - - *
 3 3 - - - * * *
 2 5 - - * * * * *
 1 7 - * * * * * *
 0 9 * * * * * * * *

$N=4$

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

row 1
 row 2

spaces

$N-1$
 $N-2$
 ⋮

$\underbrace{\quad}_{\text{no. of spaces}}$
 $n - \text{row}$

row $n-1$
 row n

$1 \quad (n - (n-1))$
 $0 \quad (n - n)$

int stars = 1;

for (row = 1; row <= N; row++)

stars += 2;

}

Diamond Star Pattern

N = 5

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

*

N = 3

*

*

row: 1 to N-1

num-stars \Rightarrow 1 (+2)

row: N-1 to 1

THANK YOU!