



Logic Building Session Day 5: March 2022

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For Loop

=====

```
public class ForLoop {  
    public static void main(String[] args) {  
  
        for(int i=1; i<=10; i++){  
            System.out.println(i);  
        }  
    }  
}
```

i++

Execute first & o/p

For Loop

=====

```
public class ForLoop {  
    public static void main(String[] args) {
```

```
        for(int i=1; i<=10; i++){  
            System.out.println(i);  
        }
```

i++
Execute first & o/p

++i
Increment , Execute .o/p

```
class forLoop1
```

```
{  
    public static void main(String args [])  
    {  
        for(int i=1;i<5;i++)  
        {  
            if(i==3)//3 == 3  
            {break;}  
            System.out.println(i);  
        }  
    }  
}
```

1
2

```
class forLoop3
```

```
{
```

```
    public static void main(String args [])
```

```
    {
```

```
        for(int i=1;i<10;i++)
```

```
        {
```

```
            if(i==5)//5==5 true
```

```
            { i++; //6
```

```
              continue;
```

```
            }
```

```
            System.out.println(i);
```

```
        } //6+1=7
```

```
    }
```

```
}
```

Command Prompt

C:\CDAC22>javac forLoop3.java

C:\CDAC22>java forLoop3

1

2

3

4

7

8

9

C:\CDAC22>

```
class forLoop3
```

```
{
```

```
    public static void main(String args [])  
    {
```

```
        for(int i=1;i<10;i++)
```

```
        {
```

```
            if(i==5)//5==5
```

```
            { i++;
```

```
              continue;
```

```
            }
```

```
            System.out.println(i);
```

```
        }
```

```
    }
```

```
}
```

→ Iteration
i=1,2,3,4,...9

continue: skip the current iteration.

CA Command Prompt

```
forLoop3.java:13: error: unreachable statement
                    System.out.println(i);
                    ^
```

1 error

C:\CDAC22>javac P1.java

C:\CDAC22>java P1

1
2
3
4
5
6
7
8
9
10



Column

R1

R2

R3

	c1	c2	c3
R1	1	1	1
R2	1	1	1
R3	1	1	1

C:\CDAC22>javac P1.java

C:\CDAC22>java P1

12345678910



Row

C:\CDAC22>javac P1.java

C:\CDAC22>java P1

P1.java

```
public static void main(String[] args) {  
    for(int i=1; i<=3; i++)  
    {  
        for(int j=1; j<=3; j++)  
        {  
            System.out.print(" 1 ");  
        }  
        System.out.println();  
    }  
}
```

Mouse

Select

Text

Draw

Stamp

Spotlight

Eraser

Format

Undo

Who can see what you share here? Recording On

Column

	c1	c2	c3
R1	1 1,1	1 1,2	1 1,3
R2	1 2,1	1 2,2	1 2,3
R3	1 3,1	1 3,2	1 3,3

3 X 3

Row

for-->i

for-->j


```
public static void main(String[] args) {
```

```
    for(int i=1; i<=3; i++)
```

```
    {
        for(int j=1; j<=3; j++)
```

```
            System.out.println(" 1 ");
```

```
        System.out.println();
```

```
    }
```

```
}
```

```
1 1 1
```

```
1 1 1
```

```
1 1 1
```

```
C:\CDAC22>javac P1.java
```

```
C:\CDAC22>java P1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
1
```

```
C:\CDAC22>
```

Print()
Println()

Println()
Println()

Column

c1

c2

c3

R1

1

1,1

1

1,2

1

1,3

R2

1

2,1

1

2,2

1

2,3

R3

1

3,1

1

3,2

1

3,3

3 X 3

Row

for-->i

for-->j

```
public static void main(String args [])
```

```
{  
    i=2  
    for(int i=1;i<=3;i++)
```

Row-->

```
{  
    for(int j=1;j<=3;j++)
```

Column-->

```
        System.out.println(" 1 ");
```

```
    System.out.println();  
}
```

j=1,2,3 => Row 1

Column

Command Prompt

```
1 1 1  
1 1 1  
1 1 1
```

```
C:\CDAC22>javac P1.java
```

```
C:\CDAC22>java P1
```

```
1  
1  
1
```

```
1  
1  
1
```

```
1  
1  
1
```

```
C:\CDAC22>
```

i j

1--> 1,2,3

2--> 1,2,3

3--> 1,2,3

Row

j: col values are iterated

i: row values are iterated

i:Row
j:Column

for-->i

for-->j

c1

c2

c3

R1

R2

R3

1	1,1	1,2	1,3
1	2,1	2,2	2,3
1	3,1	3,2	3,3

3 X 3

```
public static void main(String args [])
{
    for(int i=1;i<=3;i++)
    {
        for(int j=1;j<=3;j++)
        {
            System.out.print(i);
        }
        System.out.println();
    }
}
```

i:Row:1
j:Col: 1,2,3

Command Prompt

C:\CDAC22>javac P1.java

C:\CDAC22>java P1

111

222

333

C:\CDAC22>

```
P1.java
public static void main(String args [])
{
    for(int i=1;i<=3;i++)
    {
        for(int j=1;j<=3;j++)
        {
            System.out.print(" "+i+" "+j);
        }
        System.out.println();
    }
}
```

i:Row:1
j:Col: 1,2,3

```
Command Prompt
333
C:\CDAC22>javac P1.java
C:\CDAC22>java P1
1,1 1,2 1,3
2,1 2,2 2,3
3,1 3,2 3,3
C:\CDAC22>
```

```
class P3
{
    public static void main(String args [])
    {
        for(int i=1;i<=5;i++)//Row
        {
            for(int j=1;j<=5;j++)//Column
            {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

Command Prompt

C:\CDAC22>javac P3.java

C:\CDAC22>java P3

11111
22222
33333
44444
55555

Row:i

C:\CDAC22>javac P3.java

C:\CDAC22>java P3

12345
12345
12345
12345
12345

Column :j

C:\CDAC22>

```

class P5
{
    public static void main(String args [])
    {
        for(int i=1;i<=5;i++)//Row
        {
            for(int j=1;j<=i;j++)//Column
            {
                System.out.print(i);
            }
            System.out.println();
        }
    }
}

```

i	j
1	1
2	1,2
3	1,2,3
4	1,2,3,4
5	1,2,3,4,5

No of iteration

R1 = 1
 R2 = 2
 R3 = 3
 R4 = 4
 T5 = 5

Command Prompt

C:\CDAC22>javac P5.java

Row:i

C:\CDAC22>java P5

Row: i :1 to 5

Colu:j : 1 to 5 (inner loop)

Column :j

C:\CDAC22>

Output

```
class P9
{
    public static void main(String args [])
    {
        for(int i=1;i<=5;i++)//Row
        {
            for(int j=i;j>=1;j--)//Column
            {
                System.out.print(j+" ");
            }
            System.out.println();
        }
    }
}
```

```
Command Prompt
C:\CDAC22>javac P9.java
C:\CDAC22>java P9
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
C:\CDAC22>
```

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

Decending order