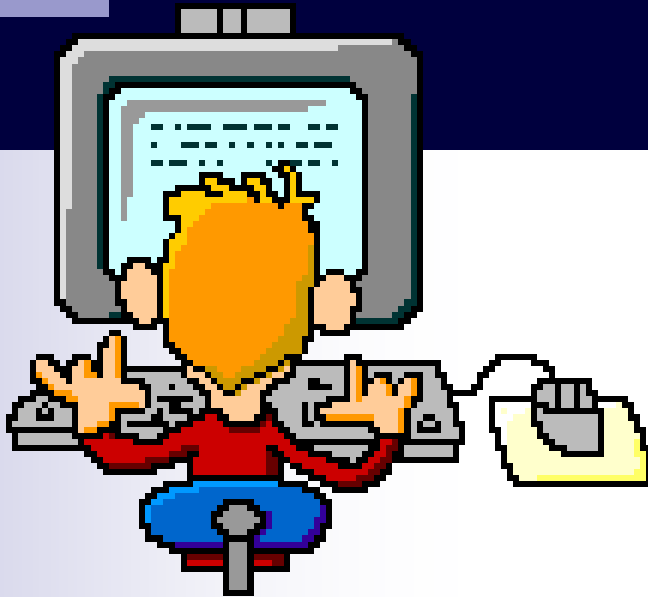


CN4001/ CD4001

Software Development

Topic 5: Programming with Loops

Part 2d



Nested loops



```
for (int i = 1; i <= 5; i++)  
{  
  
    System.out.println("*****");  
  
}
```

```
for (int i = 1; i <= 5; i++)  
{  
    System.out.print("*");  
    System.out.print("*");  
    System.out.print("*");  
    System.out.print("*");  
    System.out.print("*");  
    System.out.println( );  
}
```

```
for (int i = 1; i <= 5; i++)  
{  
    for (int j = 1; j <= 5; j++)  
    {  
        System.out.print("*");  
    }  
  
    System.out.println( );  
}
```

```
for (int i = 1; i <= 5; i++)  
{  
    for (int j = 1; j <= 5; j++)  
    {  
        System.out.print("*");  
    }  
    System.out.println( );  
}
```

Allowing the **user** to fix the size of the square



Allowing the **user** to fix the size of the square




```
System.out.println("Size of square?");  
num = keyboard.nextInt();  
for (int i = 1; i <= num; i++)  
{  
    for (int j = 1; j <= num; j++)  
    {  
        System.out.print("*");  
    }  
    System.out.println( );  
}
```

Running the program

Size of square?

8

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

Running the program

Size of square?

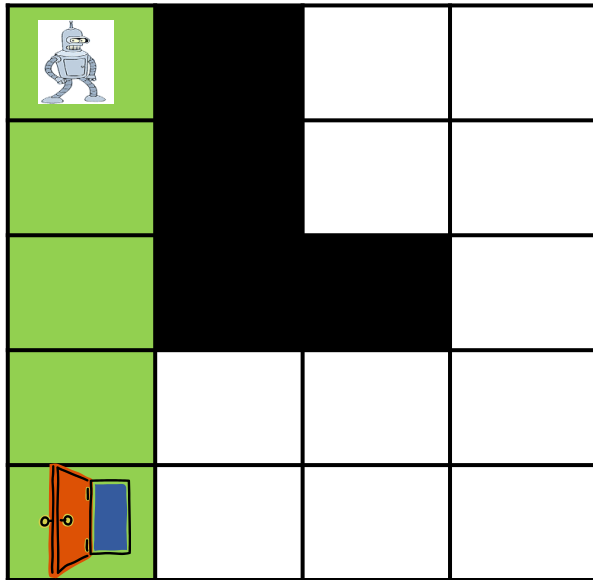
3

* * *

* * *

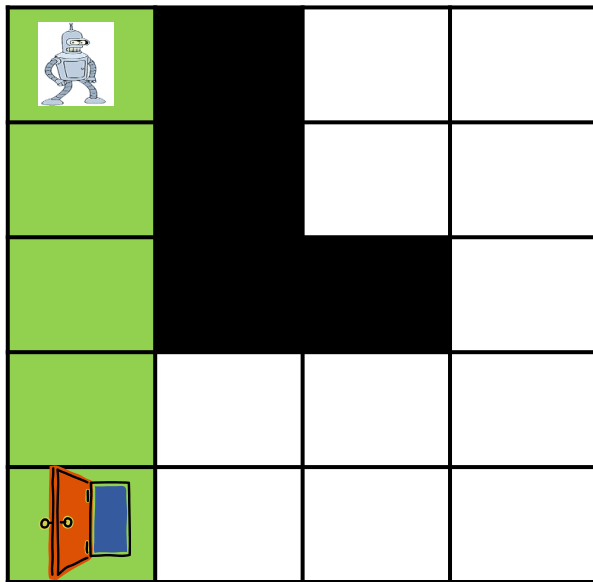
* * *

Activity



REPEAT 4 TIMES
BEGIN
MOVE down
END

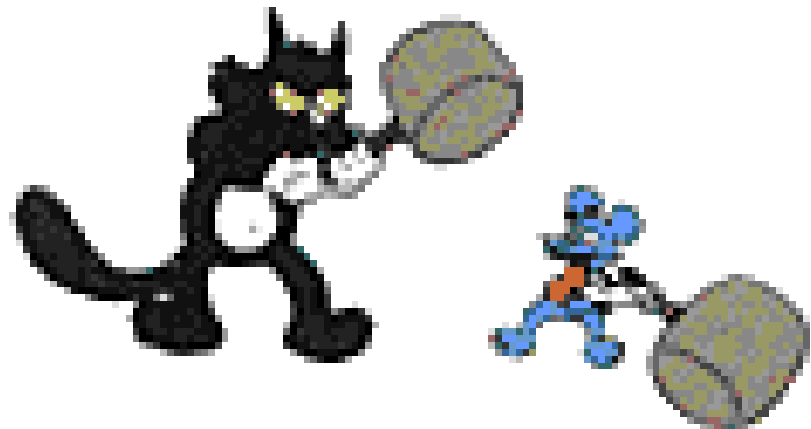
Activity



REPEAT row-1 TIMES
BEGIN
MOVE down
END

Activity

```
WHILE not end of slide  
BEGIN  
    DISPLAY animation  
END
```



Non-fixed repetitions



Loops in Java

- **for** loop;
- **while** loop;
- **do...while** loop



Loops in Java

- for loop;
- **while** loop;
- **do...while** loop

