



# CMSC 131

Fall 2018

# Continue writing static methods

## Examples:

- `public static void printChars(int n, char c) // print n copies of c`

Let's use the previous one to make these:

- `public static void printRectangle(int width, int height, char c)`
- `public static void printTriangle(int size, char c)`

# Short Circuiting

```
int x = 7, y = 10;
```

Now consider these two code fragments:

```
if (x > 4 || y++ < 3) {  
    <do something>  
}
```

```
if (x < 2 && y++ == 15) {  
    <do something>  
}
```

- Where might this be useful?

# Type Casting with Primitives

double	WIDEST
float	
long	
int	
short	
byte	NARROWEST

- Examples of implicit casting
- Examples where Java won't do implicit casting
- Explicit casting:

```
int x = (int)3.9;
```

## Details about Casting..

```
double x = 58.7;
```

```
int y = (int)x;
```

What value is stored in y? Has x changed?

Does this work?

```
int x = 3
```

```
int y = 4
```

```
double z = x / y;
```

How can we fix it with casting?

# Self Test

Which of the following are OK, and which are errors?

```
long x = 3.5;
```

```
float x = 3;
```

```
float x = 3.7;
```

```
float x = 3.7F;
```

```
double h = 3.5F;
```

```
long x = 3;
```

```
int x = 373737373737373737377373;
```

```
long x = 373773377337373773737373;
```

```
long x = 37373737373737373737373773L;
```

```
byte x = 12;
```

```
byte x = 155;
```

# Intro to Object Oriented Programming

What is an object?

Examples (What kind of objects might there be)?

- Simple chess game that people play online
- Software to monitor banking transactions
- Simulation of the University of MD
- Project #2

# State and Behaviors

- What is state?
- What are behaviors?
- Examples (What might comprise state and behaviors)?
  - BankAccount
  - Student
  - MyGrid
  - String
  - Scanner