

Introduction to Programming

with Java, for Beginners

More on Objects

Creating Objects

■ Example: Apartment and Person

```
> Person p = new Person("Bob", 'A', "Little");
> Apartment a = new Apartment ("2031 Spruce", 2, p)
OR
> Apartment a = new Apartment ("2031 Spruce", 2, new Person
("Bob", 'A', "Little" ));
>a.getTenant().getFirstName()
"Bob"
> a.changeTenant(new Person ("Alice", 'A', "Potter"));
> a.getTenant().getFirstName()
"Alice"
```

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1/3

The "this" Keyword

The keyword `this` means "this object".
It may be used to specify an instance variables and methods

```
public class Dot{
    private int x;

    public Dot(int x){
        x = x; // problem!!
    }
}

public class Dot{
    private int x;

    public Dot(int x){
        this.x = x; // fixed!!
    }
}
```

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2/3

Method that returns a new object

```
public class Dot{
    private int x;

    public Dot(int x){
        this.x = x;
    }

    public Dot displacedDot(int disAmt){
        //return new Dot with
        // x co-ordinate as x + disAmt
        int newX = x + disAmt;
        Dot d = new Dot(newX);
        return d;
    }
}
```

```
> Dot d1 = new Dot(5);
> d1.getX() //getX() not shown
5
> Dot d2 = d1.displacedDot(5);
> d2.getX()
10
```

ESE112

3/3