

# CS 213 : Software Methodology

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OOP – Constructors

# Constructor

A constructor creates an object. True or False?

**FALSE.** A constructor **initializes** an object.

In the statement `new X()`:

- the `new X` part creates an X object
- the `X()` part calls the no-arg constructor of X on the new object, to initialize it

# Constructor

When an object is created with `new`, its fields are initialized to their intrinsic default values (zero for int, null for object references, etc.). True or False?

TRUE.

This happens even before the constructor (that comes after `new`) is called, so the fields are *guaranteed* to have a predictably sane value.

# Constructor

```
public class Point { }
```

Will this class definition compile? Yes or No.

YES

So, how to create a new instance of `Point`?

```
new Point();
```

But there's no constructor in the `Point` class!

Actually there is. The compiler throws in a **default** constructor that looks like this:

```
public class Point {  
    public Point() { }  
}
```

No arguments to constructor,  
nothing in the body