

Suppose we want to extend the methods our robot understands

- Without new methods, code becomes very long
 - Harder to **read and understand**
 - Harder to find our logic errors
 - Lots of repetitive code
- There has to be a better way ...
- Suppose we **built** a robot that knew how to do more?

Defining a new class

```
public class <new-class-name>  
    extends <old-class-name>  
{  
    <new methods>  
}
```

Extends LightBot?

public class Patrolman **extends** LightBot

- The **extends** keyword indicates the Patrolman **inherits** all the capabilities of LightBot
- In other words, Patrolman understands all the methods of LightBot already
- LightBot is the **base class** of Patrolman
- Also called **superclass** or **parent class**
- Patrolman is a **derived** class of LightBot
- Also called **subclass** or **child class**