

By the end of this week you will be able to...

- Motivate the use of **classes** and **objects** in programming
- Write classes in Java
- Create objects and call methods on them
- Describe what **member variables, methods and constructors** are
- Give examples of overloading methods in Java
- Explain how to overload methods in Java
- Explain why **overloading** methods is useful
- Describe what the keywords **public** and **private** mean and their effect on where variables can be accessed
- Explain what **getters and setters** are and write them in your classes
- Draw **memory models** for reasoning about variable values for **primitive and object type data**
- Update memory models to trace the state of the variables in Java code
- Describe the notion of variable **scope**
- Explain the basic rules of scope for Java
- Draw memory models that incorporate scope
- Trace code using Java's rules for variable scope