Object-Oriented Orientation and Eclipse

4-25-2012
Opening Discussion

- Minute essay comments
  - Final preparation.
  - What is the likelihood of me losing the finals grades?
  - Review sheet?
  - Is maze solving something we have on the machines?
  - Should you switch to regular classes for the text adventure?
  - Differences between functions, classes, and case classes.
- Class participation grade.
- The Scala API is just a bunch of classes.
- What isn't an object?
- Whose brain would I copy?
- Ethical quandary on mining an inhabited asteroid.
- Relative difficulty of the final?
- You can resubmit all assignments until 5/7.
- Milkshake flavor?
- Always focus on logic.
- Office hours during reading days and finals?
Even More

- Will the Spurs win the title this year? If so, will Duncan retire?
- IcP Solutions
Differences from Case Classes

- Arguments aren't visible by default. Put `val/var` in front to see them in outside code.
- Have to be made with `new`.
- Code in the body of the class is executed immediately at creation.
- Functions defined in the body are methods of the objects.
- Data defined in the class are members of the objects.
- You can make things private.
The class is only a blueprint. To get an object we have to instantiate an instance form the class.

- new ClassName(arguments)
- This expression can be assigned to values or passed into functions. The type is the name of the class.

Once you have an object you can access members and methods using the dot notation.
You can declare singleton objects with the keyword “object”.

An object doesn't take arguments.

You can declare methods and members in the object.
Applications

- We have been playing with scripts. To make an application you put a main method in an object.
  - def main(args: Array[String]) { … }
- Compile with scalac and run with scala. (Just give the object name, no .scala.)
Applications typically are not written with command-line tools. Instead we use an Integrated Development Environment, IDE.

Eclipse is such a program.

- Free download from eclipse.org.
- Scala plug-in from scala-ide.org.

It is installed on these machines. Let us have you run it.
Questions?