

Philip Pesic

Week 13

April 16 2023

Week 13 Prog 3

* Part 3 - Write the code example 2 found in the lecture notes

Run the code.

```
package Prog3;

class prog3 {

    static void polySound(animal poly) {
        poly.animalSound();
    }

    public static void main(String[] args) {
        animal a = new animal();
        animal c = new cat();
        animal d = new dog();

        polySound(a);
        polySound(c);
        polySound(d);
        polySound(new bird());

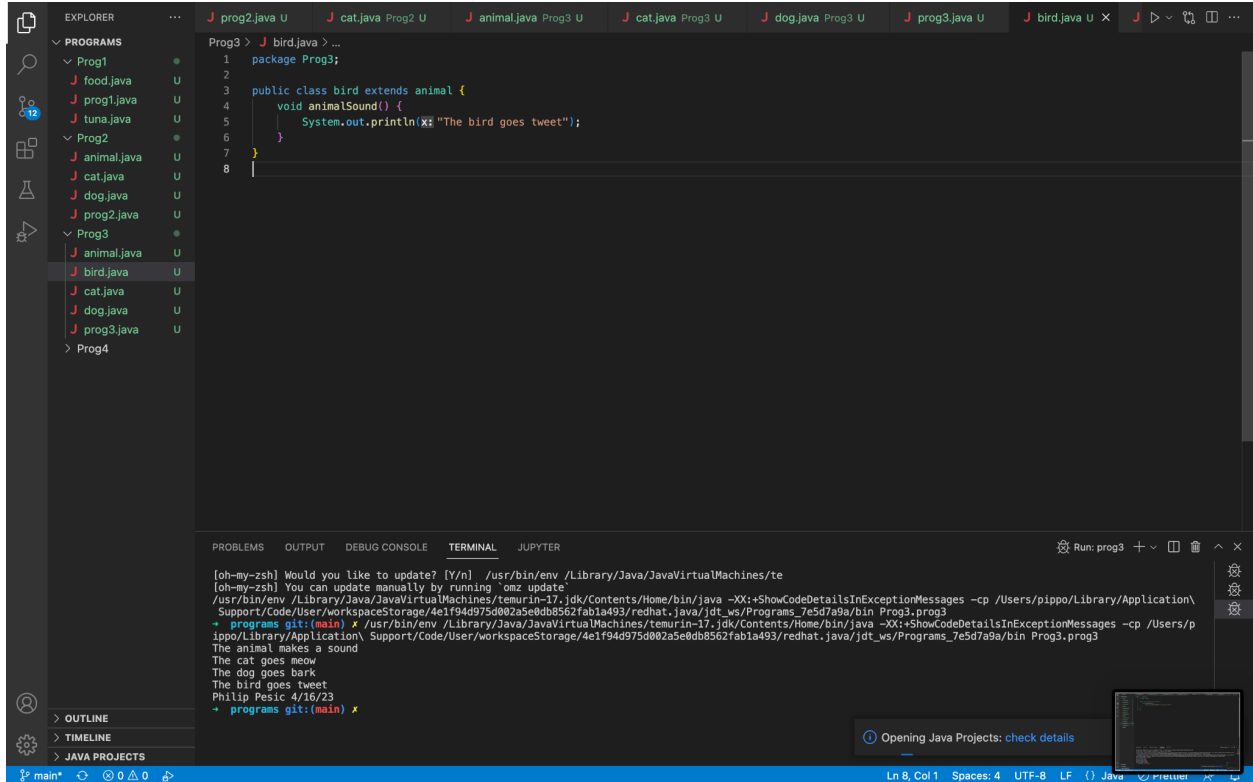
        System.out.println("Philip Pesic 4/16/23");
    }
}
```

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The screenshot shows an IDE with a project named 'Prog3'. The Explorer panel on the left lists the following files:

- Prog1
 - food.java
 - prog1.java
 - tuna.java
- Prog2
 - animal.java
 - cat.java
 - dog.java
 - prog2.java
- Prog3
 - animal.java
 - bird.java
 - cat.java
 - dog.java
 - prog3.java
- Prog4

The main editor displays the code for 'Prog3 > J bird.java > ...':

```
1 package Prog3;
2
3 public class bird extends animal {
4     void animalSound() {
5         System.out.println("The bird goes tweet");
6     }
7 }
8
```

The terminal at the bottom shows the execution output:

```
[oh-my-zsh] Would you like to update? [Y/n] /usr/bin/env /Library/Java/JavaVirtualMachines/te
[oh-my-zsh] You can update manually by running 'omz update'
/usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\
Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
+ programs git:(main) * /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/p
ippo/Library/Application\ Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
The animal makes a sound
The cat goes meow
The dog goes bark
The bird goes tweet
Philip Pesic 4/16/23
+ programs git:(main) *
```

A notification at the bottom right says "Opening Java Projects: check details". The status bar at the bottom indicates "Ln 8, Col 1 Spaces: 4 UTF-8 LF Java".

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The screenshot shows an IDE with a project explorer on the left, a code editor in the center, and a terminal at the bottom. The project explorer lists several programs, with Prog3 selected. The code editor shows the following Java code:

```
Prog3 > J dog.java > ...
1 package Prog3;
2
3 public class dog extends animal {
4     void animalSound() {
5         System.out.println("The dog goes bark");
6     }
7 }
8
```

The terminal at the bottom shows the output of running the program:

```
[oh-my-zsh] Would you like to update? [Y/n] /usr/bin/env /Library/Java/JavaVirtualMachines/te
[oh-my-zsh] You can update manually by running 'omz update'
/usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\
Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
+ programs git:(main) * /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/p
ippo/Library/Application\ Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
The animal makes a sound
The cat goes meow
The dog goes bark
The bird goes tweet
Philip Pesic 4/16/23
+ programs git:(main) *
```

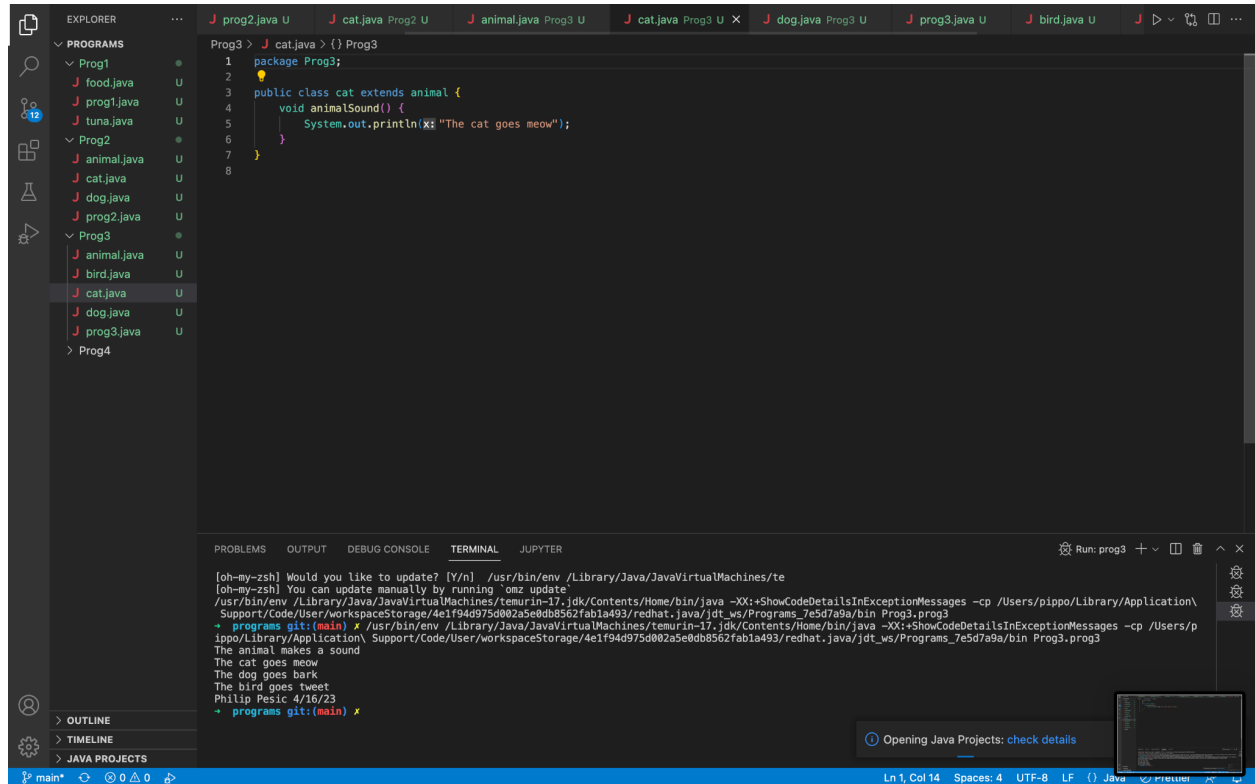
A notification at the bottom right says "Opening Java Projects: check details".

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The screenshot shows an IDE with a project explorer on the left and a terminal at the bottom. The project explorer lists several programs, with Prog3 selected. The main editor displays the code for Prog3, which is a Java class named `cat` that extends `animal` and implements the `animalSound()` method. The terminal shows the output of running the program, which prints "The cat goes meow".

```
Prog3 > J cat.java > {} Prog3
1 package Prog3;
2
3 public class cat extends animal {
4     void animalSound() {
5         System.out.println("The cat goes meow");
6     }
7 }
8
```

Terminal Output:

```
[oh-my-zsh] Would you like to update? [Y/n] /usr/bin/env /Library/Java/JavaVirtualMachines/te
[oh-my-zsh] You can update manually by running 'omz update'
/usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\
Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
+ programs git:(main) * /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/p
ippo/Library/Application\ Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
The animal makes a sound
The cat goes meow
The dog goes bark
The bird goes tweet
Philip Pesic 4/16/23
+ programs git:(main) *
```

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The screenshot shows an IDE with a project named 'Prog3'. The Explorer panel on the left lists the project structure, including files like 'animal.java', 'cat.java', 'dog.java', 'prog2.java', and 'prog3.java'. The main editor displays the code for 'Prog3 > animal.java', which defines a package 'Prog3' and a public class 'animal' with a method 'animalSound()' that prints 'The animal makes a sound()'. The terminal at the bottom shows the execution of the program, displaying the output: 'The animal makes a sound', 'The cat goes meow', 'The dog goes bark', 'The bird goes tweet', and 'Philip Pesic 4/16/23'. A notification at the bottom right indicates 'Opening Java Projects: check details'.

```
Prog3 > animal.java > {} Prog3
1 package Prog3;
2
3 public class animal {
4     void animalSound() {
5         System.out.println("The animal makes a sound");
6     }
7 }
8
```

```
[oh-my-zsh] Would you like to update? [Y/n] /usr/bin/env /Library/Java/JavaVirtualMachines/te
[oh-my-zsh] You can update manually by running 'omz update'
/usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\
Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
+ programs git:(main) * /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/p
ippo/Library/Application\ Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
The animal makes a sound
The cat goes meow
The dog goes bark
The bird goes tweet
Philip Pesic 4/16/23
+ programs git:(main) *
```

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The screenshot shows an IDE with a project explorer on the left containing several Java programs. The main editor displays the code for `prog3.java`, which defines a `prog3` class with a `polySound` method and a `main` method. The `main` method creates instances of `animal`, `cat`, and `dog`, and calls `polySound` on each, along with a `bird` object. The terminal at the bottom shows the output of the program, including the date and time of execution.

```
1 package Prog3;
2
3 class prog3 {
4
5     static void polySound(animal poly) {
6         poly.animalSound();
7     }
8
9     public static void main(String[] args) {
10         animal a = new animal();
11         animal c = new cat();
12         animal d = new dog();
13
14         polySound(a);
15         polySound(c);
16         polySound(d);
17         polySound(new bird());
18
19         System.out.println("Philip Pesic 4/16/23");
20     }
21 }
22
```

Terminal Output:

```
[oh-my-zsh] Would you like to update? [Y/n] /usr/bin/env /Library/Java/JavaVirtualMachines/te
[oh-my-zsh] You can update manually by running 'omz update'
/usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\
Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
+ programs git:(main) * /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/p
ippo/Library/Application\ Support/Code/User/workspaceStorage/4e1f94d975d002a5e8db8562fab1a493/redhat.java/jdt_ws/Programs_7e5d7a9a/bin Prog3.prog3
The animal makes a sound
The cat goes meow
The dog goes bark
The bird goes tweet
Philip Pesic 4/16/23
+ programs git:(main) *
```

I learned how to write functions that take objects as parameters