

Philip Pesic

Week 9

March 19 2023

Week 9 Prog 0

Write the program demonstrated in the Composition video Above

```
package Prog0;

class prog0 {
    public static void main(String[] args) {
        Computer c = new Computer();

        System.out.println("\n Browsing the Internet...");
        System.out.println("\n Writing source code...");
        System.out.println("\n Saving Work... \n");

        c.allDone();
        c = null;
        System.out.println("Philip Pesic 3/19/23");
    }
}

package Prog0;

public class PowerSupply {

    void turnOn() {
        System.out.println("Powering on");
    }

    void turnOff() {
        System.out.println("Powering off");
    }
}

package Prog0;

public class Computer {
    private OperatingSystem os = new OperatingSystem();
    private PowerSupply ps = new PowerSupply();
}
```

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```
    Computer() {
        ps.turnOn();
    }

    void allDone() {
        os.shutdown();
        ps.turnOff();
    }
}

package Prog0;

public class OperatingSystem {

    void bootUp() {
        System.out.println("OS is booting up");
    }

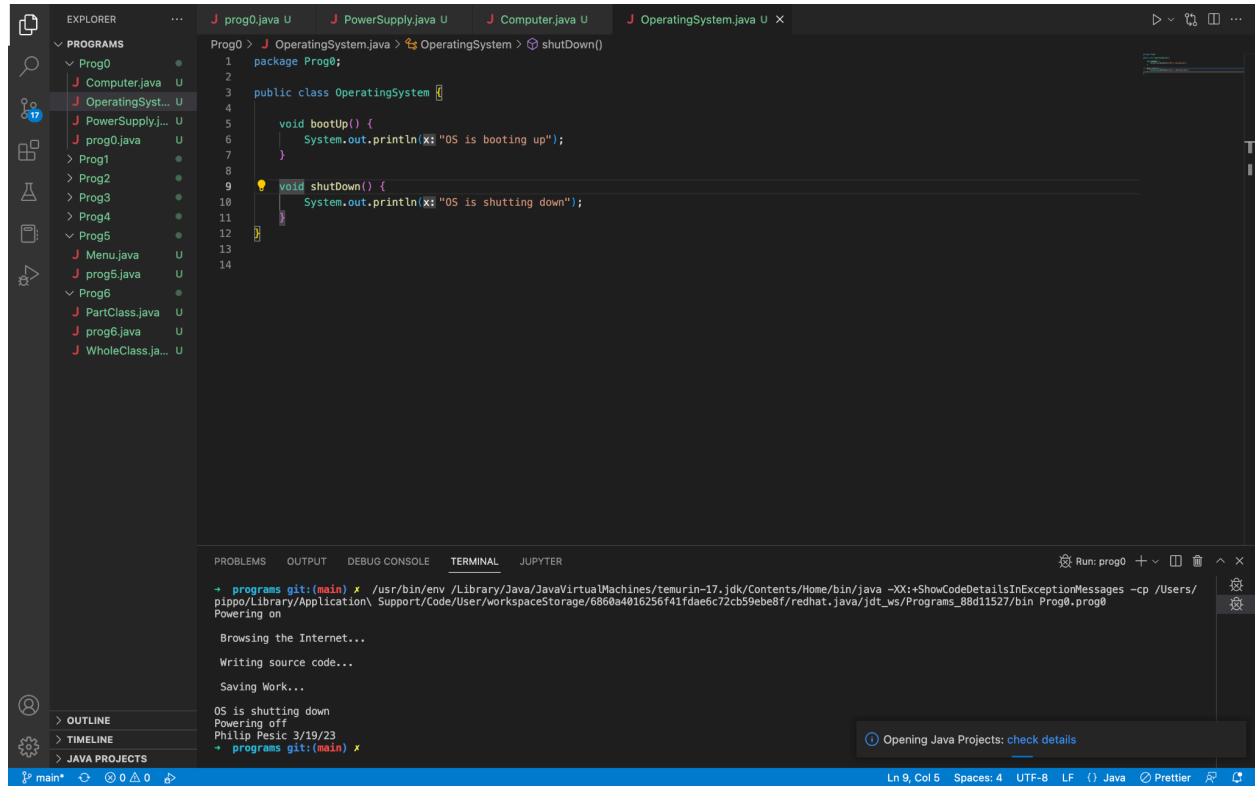
    void shutdown() {
        System.out.println("OS is shutting down");
    }
}
```

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The screenshot shows an IDE with a project named 'Prog0'. The Explorer panel on the left lists several Java files: Computer.java, OperatingSystem.java, PowerSupply.java, prog0.java, Prog1.java, Prog2.java, Prog3.java, Prog4.java, Prog5.java, Menu.java, prog5.java, Prog6.java, PartClass.java, prog6.java, and WholeClass.java. The main editor displays the code for 'OperatingSystem.java', which includes a package declaration, a class definition, and two methods: 'bootUp()' and 'shutDown()'. The 'shutDown()' method is currently selected. The terminal at the bottom shows the output of running the program, which includes messages about browsing the internet, writing source code, saving work, and the OS shutting down. A notification at the bottom right indicates that Java projects are opening.

```
Prog0 > J OperatingSystem.java > OperatingSystem > shutDown()
1 package Prog0;
2
3
4 public class OperatingSystem {
5
6     void bootUp() {
7         System.out.println("OS is booting up");
8     }
9
10    void shutDown() {
11        System.out.println("OS is shutting down");
12    }
13
14 }
```

Run: prog0

```
+ programs git:(main) x /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippol/Library/Application\ Support/Code/User/workspaceStorage/6866a4016256141fdae6c72cb59ebe8f/redhat.java/jdt_ws/Programs_68d11527/bin Prog0.prog0
Powering on

Browsing the Internet...

Writing source code...

Saving Work...

OS is shutting down
Powering off
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+ programs git:(main) x
```

Opening Java Projects: check details

Ln 9, Col 5 Spaces: 4 UTF-8 LF Java Prettier

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The screenshot shows an IDE with a project named 'Prog0'. The Explorer panel on the left lists several Java files: Computer.java, OperatingSystem.java, PowerSupply.java, prog0.java, Prog1.java, Prog2.java, Prog3.java, Prog4.java, Prog5.java, Menu.java, prog5.java, Prog6.java, PartClass.java, prog6.java, and WholeClass.java. The main editor displays the code for 'Computer.java', which includes a package declaration, class definition with private fields for 'OperatingSystem' and 'PowerSupply', and methods for 'Computer()', 'allDone()', 'turnOn()', and 'turnOff()'. The 'allDone()' method calls 'turnOff()' on the 'os' object and 'turnOff()' on the 'ps' object. The bottom panel shows the 'TERMINAL' output, which includes the command to run the program, followed by messages: 'Browsing the Internet...', 'Writing source code...', 'Saving Work...', 'OS is shutting down', 'Powering off', and 'Philip Pesic 3/19/23'. A notification at the bottom right says 'Opening Java Projects: check details'.

```
Prog0 > J Computer.java > Computer > allDone()
1 package Prog0;
2
3 public class Computer {
4     private OperatingSystem os = new OperatingSystem();
5     private PowerSupply ps = new PowerSupply();
6
7     Computer() {
8         ps.turnOn();
9     }
10
11     void allDone() {
12         os.shutDown();
13         ps.turnOff();
14     }
15 }
16
```

Run: prog0

```
+ programs git:(main) x /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pipipo/Library/Application\ Support/Code/User/workspaceStorage/6866a4016256141fdae6c72cb59ebe8f/redhat.java/jdt_ws/Programs_68d11527/bin Prog0.prog0
Powering on

Browsing the Internet...

Writing source code...

Saving Work...

OS is shutting down
Powering off
Philip Pesic 3/19/23
+ programs git:(main) x
```

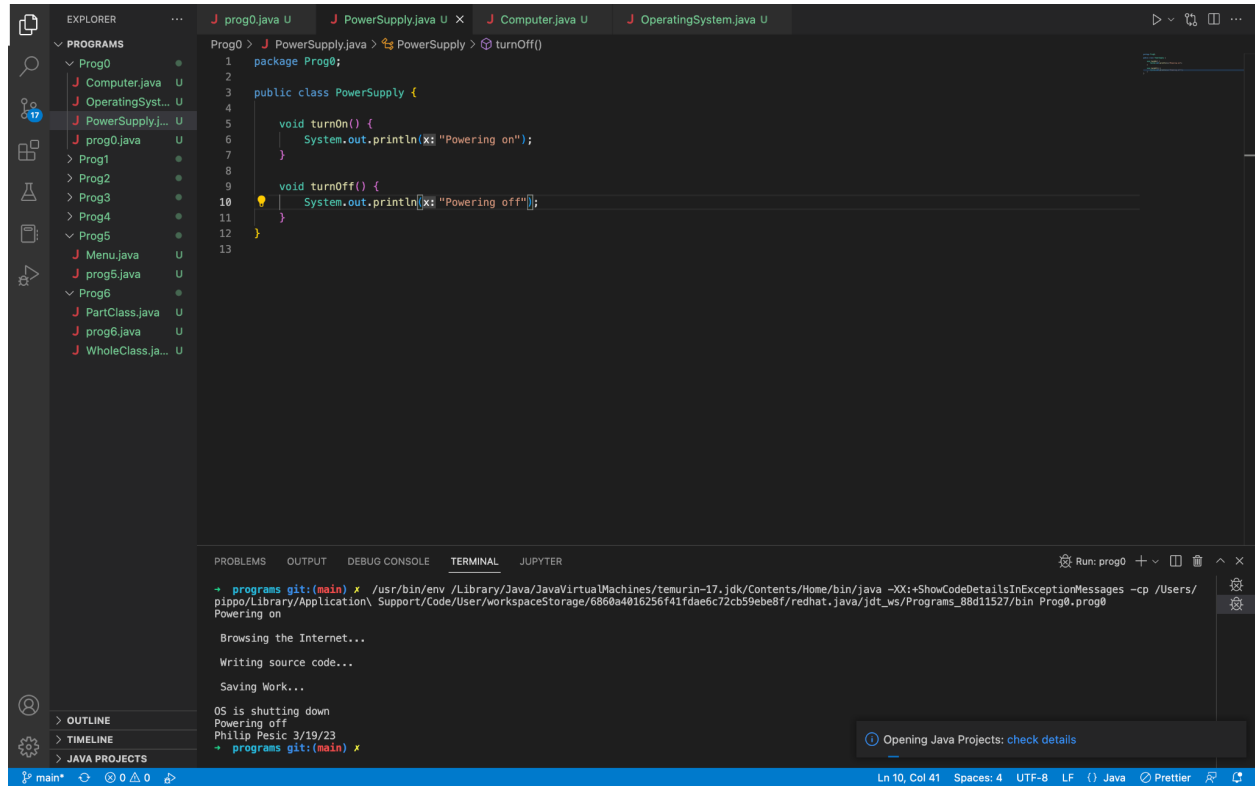
Ln 11, Col 5 Spaces: 4 UTF-8 LF Java Prettier

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The screenshot shows an IDE with a dark theme. The Explorer panel on the left lists several Java files under 'PROGRAMS', including 'Prog0', 'Computer.java', 'OperatingSystem.java', 'PowerSupply.java', and others. The main editor displays the code for 'PowerSupply.java', which includes a package declaration, a class definition, and two methods: 'turnOn()' and 'turnOff()'. The 'turnOff()' method has a red squiggly line under the closing brace, indicating a syntax error. The terminal at the bottom shows the output of running the program, including messages like 'Powering on', 'Browsing the Internet...', 'Writing source code...', 'Saving Work...', and 'OS is shutting down'. A notification banner at the bottom right says 'Opening Java Projects: check details'.

```
1 package Prog0;
2
3 public class PowerSupply {
4
5     void turnOn() {
6         System.out.println("Powering on");
7     }
8
9     void turnOff() {
10        System.out.println("Powering off");
11    }
12 }
13
```

Run: prog0

programs git:(main) x /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pippo/Library/Application\ Support/Code/User/workspaceStorage/6866a4016256141fdae6c72cb59ebe8f/redhat.java/jdt\_ws/Programs\_68d11527/bin Prog0.prog0

Powering on

Browsing the Internet...

Writing source code...

Saving Work...

OS is shutting down

Powering off

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programs git:(main) x

Opening Java Projects: check details

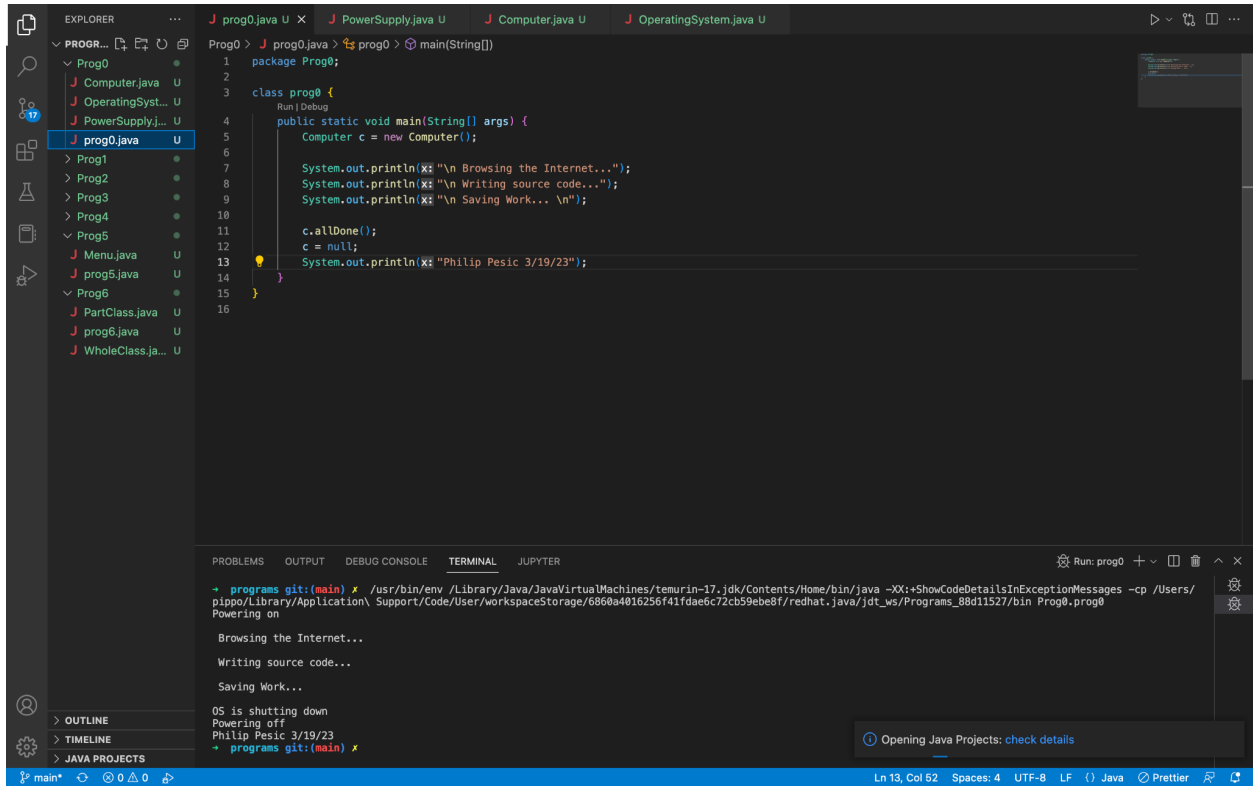
Ln 10, Col 41 Spaces: 4 UTF-8 LF Java Prettier

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The screenshot shows an IDE with a project named 'PROG0'. The Explorer panel on the left lists files: 'Computer.java', 'OperatingSystem.java', 'PowerSupply.java', 'prog0.java', 'Prog1', 'Prog2', 'Prog3', 'Prog4', 'Prog5', 'Menu.java', 'prog5.java', 'Prog6', 'PartClass.java', 'prog6.java', and 'WholeClass.java'. The main editor displays the code for 'prog0.java':

```
1 package Prog0;
2
3 class prog0 {
4     public static void main(String[] args) {
5         Computer c = new Computer();
6
7         System.out.println("Browsing the Internet...");
8         System.out.println("Writing source code...");
9         System.out.println("Saving Work... \n");
10
11         c.allDone();
12         c = null;
13         System.out.println("Philip Pesic 3/19/23");
14     }
15 }
16
```

The bottom panel shows the 'TERMINAL' output:

```
+ programs git:(main) x /usr/bin/env /Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/pipipo/Library/Application\ Support/Code/User/workspaceStorage/6866a4016256141fdae6c72cb59ebe6f/redhat.java/jdt_ws/Programs_68d11527/bin Prog0.prog0
Powering on
Browsing the Internet...
Writing source code...
Saving Work...
OS is shutting down
Powering off
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+ programs git:(main) x
```

A notification at the bottom right says 'Opening Java Projects: check details'. The status bar at the bottom indicates 'Ln 13, Col 52', 'Spaces: 4', 'UTF-8', 'LF', 'Java', 'Prettier', and 'main\*'.

I learned: how to use composition in my programs