LAB

Day 2 — Java Compiles Before It Runs

Receipt Printer: Online

Name: _____ Date: _____

Directions

1. Type the CodeGrove link below. It opens Receipt Printer in CodeGrove, our online code lab.
2. Do all three tasks in CodeGrove. Press Check until every check passes.
3. These programs read nothing from the keyboard. Press Run to see what your program prints.
4. On this sheet, write the lines it asks for and a Why answer for each task.

CodeGrove link: madlyproductivepathways.com/codegrove?course=java&level=1.1b

Check tells you if your code works. It is not your grade. You may use up to three hints.

Each question has a tag that shows where to do the work.

Use CodeGrove Do the work in CodeGrove. Then write your final answer on this sheet.

Paper only Answer on this sheet. You don't need CodeGrove.

How do you earn points?

Each task is worth 4 points: 2 for the lines you write and 2 for the Why answer.

The sheet is worth 12 points.

Task 1: Fix the Header

The Hawthorne Hardware receipt header has two errors. Fix them so the header prints.

1. Run the code. Read the error's line number and message in the Output.

2. Fix that line, then run again to look for the next error.

3. Stop when the code prints like the Example.

Tip: Java cares about capital letters. `System` and `system` are different names.

Example 1

Input

```
(nothing to type)
```

Output

```
Hawthorne Hardware
Tools, paint and garden supplies
--------------------
```

1. Write the two lines you fixed so the receipt header compiles and prints. (2 points)

Use CodeGrove

Starter code

```
1  public class Main {
2      public static void main(String[] args) {
3          // The receipt header
4          System.out.println("Hawthorne Hardware")
5          system.out.println("Tools, paint and garden supplies");
6          System.out.println("--------------------");
7      }
8  }
```

In the box below, write only the lines the question asks for.

Main.java

```
1
2
3
4
```

2. Why did Java stop at each of the two lines until you fixed it? Write 1 sentence. (2 points)

Paper only

Task 2: Fix the Items

Two item lines on the receipt have errors. Fix both so the items print.

1. Run the code. Read the error's line number and message in the Output.

2. Fix that line, then run again to look for the next error.

3. Stop when the code prints like the Example.

Tip: Every text needs a quote mark at its start and at its end.

Example 1

Input

```
(nothing to type)
```

Output

```
Hawthorne Hardware
Hammer: $15
Paint roller: $8
```

3. Write the two item lines you fixed so the receipt compiles and prints. (2 points)

Use CodeGrove

Starter code

```java
public class Main {
    public static void main(String[] args) {
        System.out.println("Hawthorne Hardware");
        // The items
        System.out.println("Hammer: $15);
        System.out.printLn("Paint roller: $8");
    }
}
```

In the box below, write only the lines the question asks for.

Main.java

```
1
2
3
4
```

4. Why did Java stop at each of the two item lines? Write 1 sentence. (2 points)

Paper only

Task 3: Print the Receipt

Finish the Hawthorne Hardware receipt. Each item's name and price share one line, as the Example shows.

1. Add a `//` comment at the top that says what the program prints.

2. For each item, `print` its name. Then `println` its price.

3. Turn off the test line: put `/*` before it and `*/` after it.

Tip: Use the Example to get each name, price and space just right.

Example 1

Input

```
(nothing to type)
```

Output

```
Hawthorne Hardware
Hammer: $15
Paint roller: $8
Garden gloves: $6
Total: $29
```

5. Write these lines: the comment you added on top, the `print` and `println` lines for the Hammer, and the test line you turned off. (2 points)

Use CodeGrove

Starter code

```
1  public class Main {
2      public static void main(String[] args) {
3          System.out.println("Hawthorne Hardware");
4          // Print each item here.
5
6          System.out.println("Total: $29");
7          System.out.println("TEST: Is the printer on?");
8      }
9  }
```

In the box below, write only the lines the question asks for.

Main.java

```
1
2
3
4
5
6
```

6. Why does `print` keep an item's name and price on one line, and why doesn't the test line print anymore? Write 1 sentence. (2 points)

Paper only