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Course: Programming 1
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Module 2 Critical Thinking Assignment: Option 1 - Calculate Average Withholding

[Git Project Folder](#)

Create a program that will calculate the weekly average tax withholding for a customer given the following weekly income guidelines:

- Income less than \$500: tax rate 10%
- Incomes greater than/equal to \$500 and less than \$1500: tax rate 15%
- Incomes greater than/equal to \$1500 and less than \$2500: tax rate 20%
- Incomes greater than/equal to \$2500: tax rate 30%

Pseudocode

```
Declare class:
  Declare main method:
    Declare float income field
    Assign income field from user input
    Declare float taxWithholding field
    If income less than 0:
      Print income must be greater than or equal to zero
    Else if income less than 500:
      Assign taxWithholding to 0.10 * income
    Else if income less than 1500:
      Assign taxWithholding to 0.15 * income
    Else if income less than 2500:
      Assign taxWithholding to 0.20 * income
    Else:
      Assign taxWithholding to 0.30 * income
    Print taxWithholding
```

Source Code

```
import java.util.Scanner;

public class App {
    public static void main(String[] args) throws Exception {
        Scanner userInput = new Scanner(System.in);
        System.out.print("Enter weekly income in dollars: ");
        float income = userInput.nextFloat();
        float taxWithholding = 0;

        if (income < 0) {
```

```
        System.out.println("Error: income must be greater than or equal to zero  
dollars.");  
    }  
  
    else {  
        if (income < 500) {  
            taxWithholding = 0.1f * income;  
        }  
        else if (income < 1500) {  
            taxWithholding = 0.15f * income;  
        }  
        else if (income < 2500) {  
            taxWithholding = 0.2f * income;  
        }  
        else {  
            taxWithholding = 0.3f * income;  
        }  
  
        System.out.println("Weekly tax withholding is " + taxWithholding);  
    }  
  
    userInput.close();  
}  
}
```

Result

Input: Enter weekly income in dollars: 600
Output: Weekly tax withholding is 90.0

Screenshot of Execution

The screenshot shows an IDE with a Java file named `App.java` and a terminal window. The Java code is a `public class App` with a `main` method that calculates weekly tax withholding based on income. The terminal shows the program being run twice: first with an income of 1400, resulting in a withholding of 210.00002, and then with an income of 600, resulting in a withholding of 90.0. The terminal also shows the command used to run the program: `cd /Users/corwinbell/repos/programming-1-csu/module2 ; /usr/bin/env ./Library/Java/JavaVirtualMachines/jdk-21.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/corwinbell/repos/programming-1-csu/module2/bin App`.

```
src > J App.java M X ① README.md M
src > J App.java > App > main(String[])
3 public class App {
4     public static void main(String[] args) throws Exception {
11         System.out.println(x:"Error: income must be greater than or equal to zero dollars.");
12     }
13
14     else {
15         if (income < 500) {
16             taxWithholding = 0.1f * income;
17         }
18         else if (income < 1500) {
19             taxWithholding = 0.15f * income;
20         }
21         else if (income < 2500) {
22             taxWithholding = 0.2f * income;
23         }
24         else {
25             taxWithholding = 0.3f * income;
26         }
27
28         System.out.println("Weekly tax withholding is " + taxWithholding);
29     }
30
31     userInput.close();
32 }
33
34 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

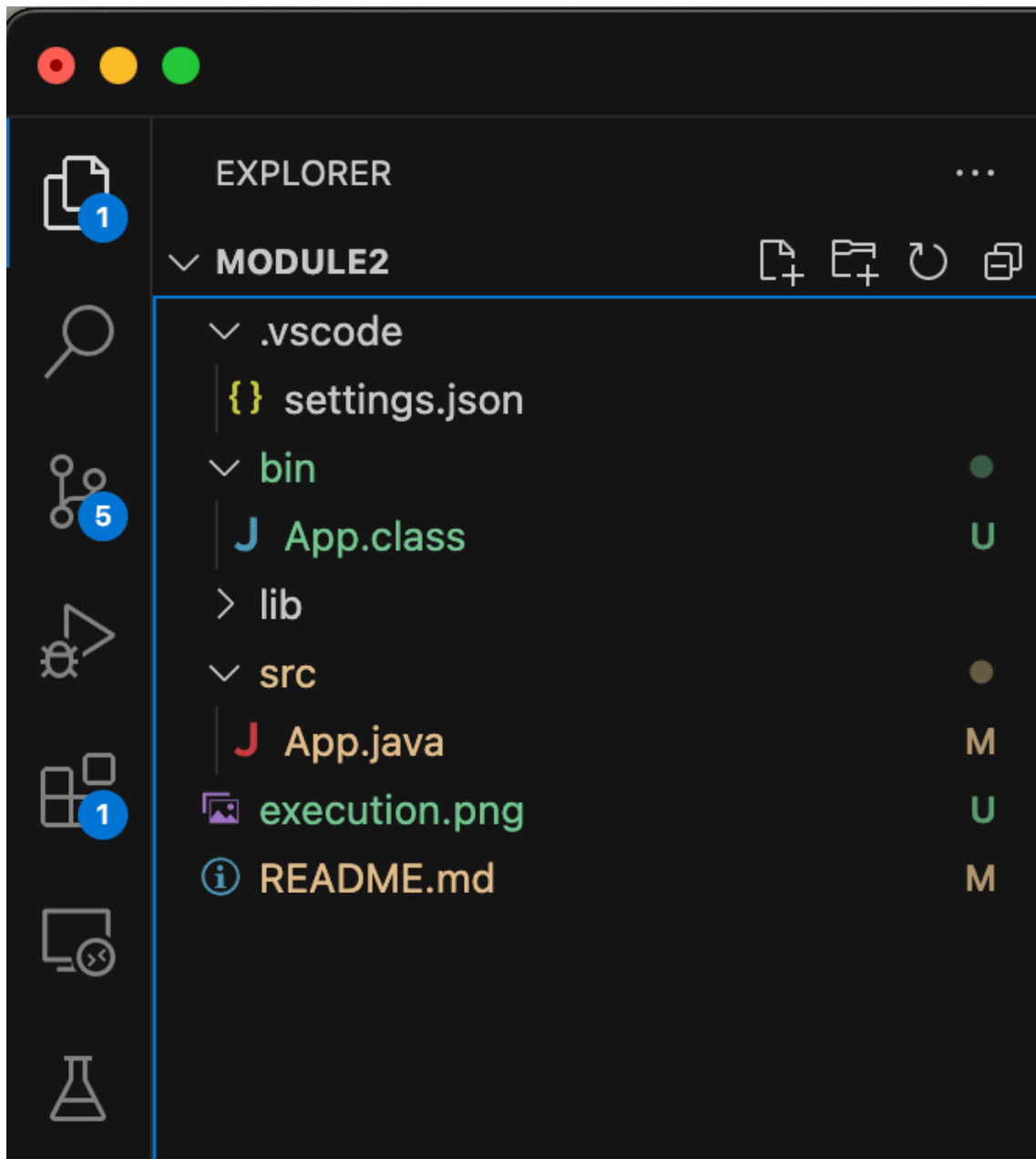
```
e2/bin App
Enter weekly income in dollars: 1400
Weekly tax withholding is 210.00002
(base) corwinbell@Corwins-Air module2 %

(base) corwinbell@Corwins-Air module2 %
(base) corwinbell@Corwins-Air module2 % cd /Users/corwinbell/repos/programming-1-csu/module2 ; /usr/bin/env ./Library/Java/JavaVirtualMachines/jdk-21.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/corwinbell/repos/programming-1-csu/module2/bin App
Enter weekly income in dollars: 600
Weekly tax withholding is 90.0
(base) corwinbell@Corwins-Air module2 %
```

zsh
Run: App

Git Repo path and project folder Screenshot

<https://github.com/corwin-bell/programming-1-csu.git>



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