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

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

```java
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
```

```java
        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

```java
    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
```
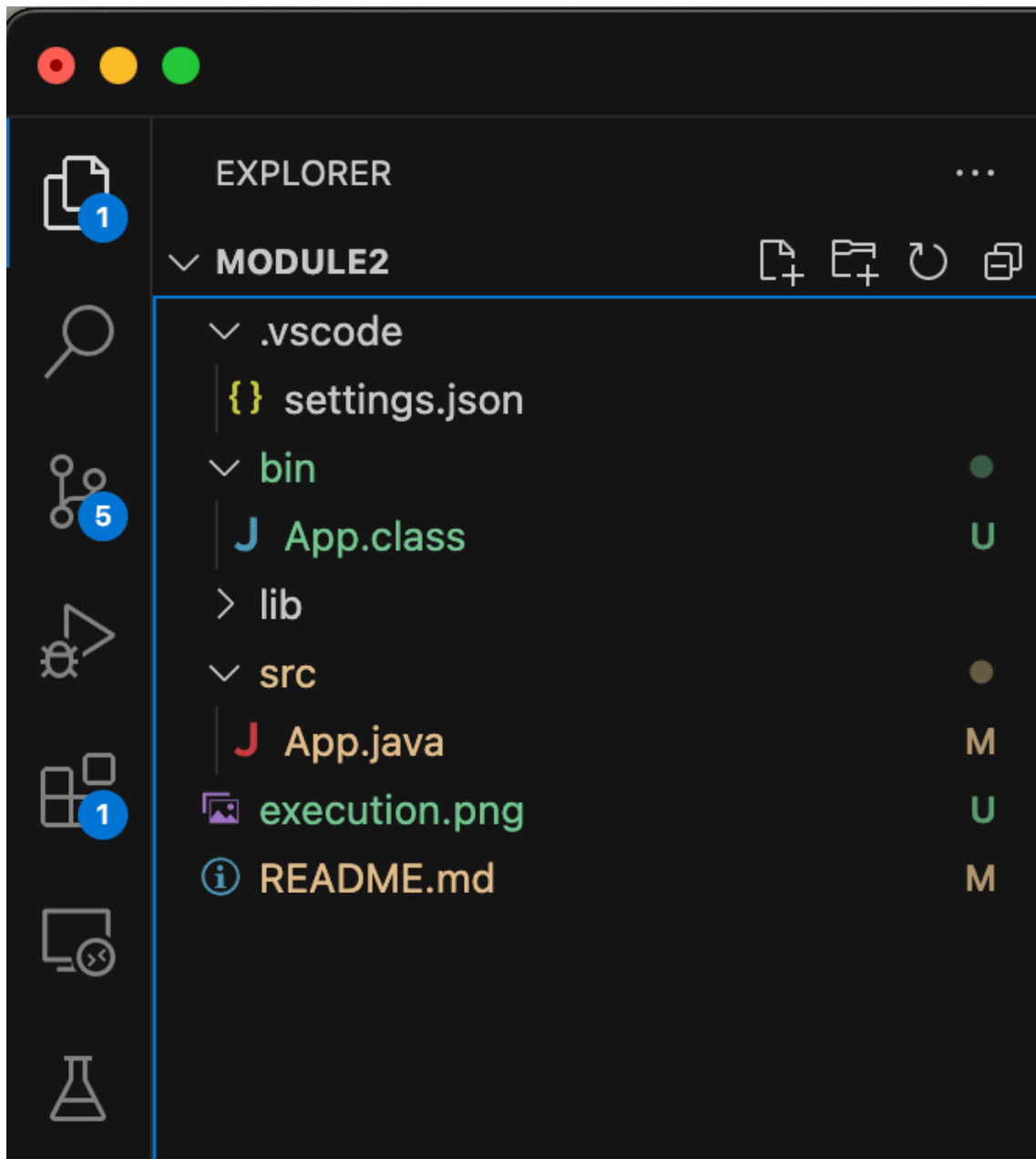
```
PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

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/JavaVirtual
Machines/jdk-21.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages -cp /Users/corwinbell/repos/programming-1-csu/modul
e2/bin App
Enter weekly income in dollars: 600
Weekly tax withholding is 90.0
○ (base) corwinbell@Corwins-Air module2 %
```

Git Repo path and project folder Screenshot

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