CRITICAL THINKING ASSIGNMENT #3 OPTION 1

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- CSC320: Programming 1

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Pseudocode:

// Create a Static method called taxCalc to calculate tax withholding

1. Declare a variable named taxRate
2. If income is less than 500, set taxRate to 10%
3. Else if income is between 500 and 1500, set taxRate to 15%
4. Else if income is between 1500 and 2500, set taxRate to 20%
5. Else, set taxRate to 30%

// Define the variables

Income

avgTaxWidhholding

// Prompt the User input for income

Income

// Call the Method for Tax Withholding

taxCalc

// Print results

PRINT "The weekly average tax withholding of income: ", avgTaxWidhholding

// Resource leak input close

input

Screenshot Code:

```java
public class Widthholding {

    // Static method to calculate tax withholding
    public static double taxCalc(double income) {
        // tax rate
        double taxRate;

        // conditional statements for various incomes
        if (income < 500) {
            taxRate = 0.10;

        } else if (income >= 500 && income < 1500) {
            taxRate = .15;

        } else if (income >= 1500 && income < 2500) {
            taxRate = .20;

        } else {
            taxRate = .30;
        }

        // return income by tax rate
        return income * taxRate;
    }

    public static void main(String[] args) {

        // import scanner class
        Scanner input = new Scanner(System.in);

        // variables
        double income;
        double avgTaxWidhholding;

        // user input
        System.out.println("Enter income: ");
        income = input.nextDouble();

        // calling method to calculate tax withholding
        avgTaxWidhholding = taxCalc(income);

        // print results
        System.out.printf("The weekly average tax widthholding of $%.2f is: $%.2f ", income, avgTaxWidhholding);

        // close input for resource leak
        input.close();

    }
}
```

Results:

```
Enter income:
400
The weekly average tax widthholding of $400.00 is: $40.00
```

```
Enter income:
500
The weekly average tax widthholding of $500.00 is: $75.00
```

```
Enter income:
1500
The weekly average tax widthholding of $1500.00 is: $300.00
```