

Reflection Log - Project (Mastery)

I so far have defined all variables I need which ask the user for the time spent doing a certain part of completing the task.

```
package Mastery;

import java.util.Scanner;

public class ProjectMastery {

    public static void main(String[] args)
    {
        Scanner userInput = new Scanner(System.in);

        System.out.print("How much time was spent designing the project application?");
        int designing = userInput.nextInt();

        System.out.print("How much time was spent coding the project application?");
        int coding = userInput.nextInt();

        System.out.print("How much time was spent debugging the project application?");
        int debugging = userInput.nextInt();

        System.out.print("How much time was spent testing the project application?");
        int testing = userInput.nextInt();

    }
}
```

After previously defining all the variables for the user's input, I have taken those variables and calculated the total time which adds each input. After that, I take the average by dividing the total time, by the time taken for a certain task, then multiply it by 100 to get the percentage. (Note after this reflection log was made I realized: This code is incorrect, and I will need to change it.)

```
int total_T = testing + debugging + coding + designing;

int design_P = total_T / designing;
int coding_P = total_T / coding;
int debug_P = total_T / debugging;
int testing_P = total_T / testing;
```

I realized that each variable has to be a double since the division statement would lead to a decimal value. Along with that, I added the **NumberFormat** statement to automatically convert a number into percentage, which I will use later. At the bottom, I flipped the division statement and corrected it so it properly calculates the percentage of each part of the time taken as a decimal. I have also added a space in the code which will create cleaner output.

```
package mastery;

import java.text.NumberFormat;
import java.util.Scanner;

public class ProjectMastery {

    public static void main(String[] args)
    {
        Scanner userInput = new Scanner(System.in);

        NumberFormat nf = NumberFormat.getPercentInstance();

        System.out.print("How much time was spent designing the project application? ");
        double designing = userInput.nextInt();

        System.out.print("How much time was spent coding the project application? ");
        double coding = userInput.nextInt();

        System.out.print("How much time was spent debugging the project application? ");
        double debugging = userInput.nextInt();

        System.out.print("How much time was spent testing the project application? ");
        double testing = userInput.nextInt();

        System.out.print(" ");

        double total_T = testing + debugging + coding + designing;

        double design_P = designing / total_T;
        double coding_P = coding / total_T;
        double debug_P = debugging / total_T;
        double testing_P = testing / total_T;
```

To finish my code, I have added the output in the format of a table, and used the **NumberFormat** from earlier to easily convert my decimal value into a percentage.

```
        System.out.println("Task           % Time");
        System.out.println("Designing      " + nf.format(design_P));
        System.out.println("Coding         " + nf.format(coding_P));
        System.out.println("Debugging      " + nf.format(debug_P));
        System.out.println("Testing        " + nf.format(testing_P));

    }
```