Reflection Log Metric Conversions

```
package Mastery;

import java.util.Scanner;

public class MetricConversion {

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

        int choice = 0;

        while (choice != 9) {
            displayMenu();

            choice = userInput.nextInt();

            if (choice >= 1 && choice <= 8)

                System.out.print("Enter value: ");

                double value = userInput.nextDouble();

                double result = convert(choice, value);

                System.out.println("Result: " + result);

                break;

        }
    }
```

The program is ready to calculate the conversions based on what the user will input.

```
    public static void displayMenu() {

        // Program prompts the user for which conversion they wish to choose.

        System.out.println("Metric Conversion Menu:");

        System.out.println("1. inches to centimeters");

        System.out.println("2. centimeters to inches");

        System.out.println("3. feet to centimeters");

        System.out.println("4. centimeters to feet");

        System.out.println("5. yards to meters");

        System.out.println("6. meters to yards");

        System.out.println("7. miles to kilometers");

        System.out.println("8. kilometers to miles");

        System.out.print("Choose an option 1-8: ");
    }
    public static double convert(int choice, double value) {

        double[] conversions = {2.54, 1 / 2.54, 30.48, 1 / 30.48, 0.9144, 1 / 0.9144, 1.6093, 1 / 1.6093};

        return value * conversions[choice - 1];
    }
}
```

Program will output the options for what you would like to convert based on the input from the user.