How has your program changed from planning to coding to now?

Planning Stage

- Identify Inputs and Outputs:
    - INPUT: which metric conversion user wants
    - Output: Output the values of a certain measurement into another for user to use

Design the Structure:

- Takes in the user choice metric conversions
- The user choice opens up the switch sequence then allows the program to convert measurements.

(The planning had changed Through)

Design the structure Change:

- The measurements aren't fully accurate as we need to have a certain number to convert these numbers where the All the methods below the code come in to support each case.
-

Please explain?

```
Scanner USERINPUT = new Scanner(System.in);
   int Option;
    {

       System.out.println("A. Inches to Centimeters");
       System.out.println("B. Feet to Centimeters");
       System.out.println("C. Yards to Meters");
       System.out.println("D. Miles to Km");
       System.out.println("E. Km to Miles");
       System.out.print("Enter your option (1-5): ");
```

My code Uses the scanner prompts called (User Input) to give the user the ability to share information. Then allow the user to have an option to pick between 1 through five metric conversions then prompts the user to enter their choice.

```
Option = USERINPUT.nextInt();
switch (Option) {
    case 1:
        System.out.print("Please enter inches: ");

        double Inche = USERINPUT.nextDouble();

        double cent = incheToCent(Inche);

        System.out.printf("%.2f inches is %.2f centimeters.%n", Inche, cent);
        break;



    case 2:
        System.out.print("Please enter feet: ");

        double feet = USERINPUT.nextDouble();

        cent = feetToCent(feet);

        System.out.printf("%.2f feet is %.2f centimeters.%n", feet, cent);
        break;



    case 3:
        System.out.print("Please enter yards: ");

        double yards = USERINPUT.nextDouble();

        double meters = yardsToM(yards);

        System.out.printf("%.2f yards is %.2f meters.%n", yards, meters);
        break;



    case 4:
        System.out.print("Please enter miles: ");

        double miles = USERINPUT.nextDouble();

        double Km = milesToKm(miles);

        System.out.printf("%.2f miles is %.2f kilometers.%n", miles, Km);
        break;



    case 5:
        System.out.print("Please enter kilometers: ");

        Km = USERINPUT.nextDouble();

        miles = KmToMiles(Km);

        System.out.printf("%.2f kilometers is %.2f miles.%n", Km, miles);
        break;

    default:
        System.out.println("That is not a choice. Please try again.");
```

The user choice between the five metric conversion is then used to pick which case in the switch sequence called (Option) . Then in the specific case the program asks again from the number of (inches,feet yards,miles) then the program will convert the number into (centimeters, meters, Kilometer, miles).

```
}

public static double incheToCent(double inche) {
    return inche * 2.54;
}
public static double feetToCent(double feet) {
    return feet * 30.48;
}
public static double yardsToM(double yards) {
    return yards * 0.9144;
}
public static double milesToKm(double miles) {
    return miles * 1.60934;
}
public static double kmToMiles(double km) {
    return km / 1.60934;
}
```

The code takes in the specific case that they have their own methods Ex.(IncheToCent) allows the switch case to output conversion values.