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 class below the code come in to support each case.

```
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 classes Ex.(IncheToCent) allows the switch case to output conversion values.