

UNIT CONVERTER PROJECT

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```
import java.io.*;
public class unit_converter
{
    int choice1,choice2;
    BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
    public void inputmenu()throws IOException
    {
        System.out.println("1. Temperature");
        System.out.println("2. Distance");
        System.out.println("3. Volume");

        System.out.println("Enter your choice (1-3)");
        choice1=Integer.parseInt(br.readLine());
        calculation(); // calling calculation function
    }
    public void calculation()throws IOException
    {
        switch(choice1)
        {
            case 1: //start of Temperature menu
                System.out.println("1. Celcius to Fahrenheit ");
                System.out.println("2. Fahrenheit to Celcius");
                System.out.println("3. Celcius to Kelvin");
                System.out.println("4. Kelvin to Celcius");
                System.out.println("5. Kelvin to Fahrenheit");
                System.out.println("6. Fahrenheit to Kelvin");

                System.out.println("Enter your choice (1-6)");
                choice2=Integer.parseInt(br.readLine());

                double C,F,L,CM,GL,K,M,I,ML;
                switch(choice2)
                {
                    case 1:
                        System.out.println("Enter temperature in Celcius");
                        C=Double.parseDouble(br.readLine());
                        F=(9*C+160)/5;
                        System.out.println("Temperature in Fahrenheit is "+F);
                        break;

                    case 2:
                        System.out.println("Enter temperature in Fahrenheit");
                        F=Double.parseDouble(br.readLine());
                        C=(5*F-160)/9;
                        System.out.println("Temperature in Celcius is "+C);
                        break;

                    case 3:
                        System.out.println("Enter temperature in Celcius");
                        C=Double.parseDouble(br.readLine());
                        K=273.15+C;
                        System.out.println("Temperature in Kelvin is "+K);
                        break;

                    case 4:
                        System.out.println("Enter temperature in Kelvin");
                        K=Double.parseDouble(br.readLine());
                        C=K-273.15;
                        System.out.println("Temperature in Celcius is "+C);
                        break;

                    case 5:
                        System.out.println("Enter temperature in Kelvin");
                        K=Double.parseDouble(br.readLine());
                        C=K-273.15;
                        F=(9*C+160)/5;
                        System.out.println("Temperature in Fahrenheit is "+F);
                        break;

                    case 6:
                        System.out.println("Enter temperature in Fahrenheit");
                        F=Double.parseDouble(br.readLine());
                        C=(5*F-160)/9;
                        K=273.15+C;
                        System.out.println("Temperature in Kelvin is "+K);
                        break;

                    default :
                        System.out.println("Wrong choice. It should be 1 to 6");
                }
            }
        }
    }
    //end of temperature choice
    break;
    case 2: //start of Distance menu
        System.out.println("1. Mile to Kilometer");
        System.out.println("2. Kilometer to Mile");
        System.out.println("3. Inch to Meter");
        System.out.println("4. Mile to Inch");
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System.out.println("5. Centimeter to Meter");
System.out.println("6. Meter to Centimeter");

System.out.println("Enter your choice (1-6)");
choice2=Integer.parseInt(br.readLine());
switch(choice2)
{
    case 1:
        System.out.println("Enter Distance in Mile");
        M=Double.parseDouble(br.readLine());
        K=M*1.60934;
        System.out.println("Distance in Kilometer is "+K);
        break;

    case 2:
        System.out.println("Enter Distance in Kilometer");
        K=Double.parseDouble(br.readLine());
        M=K*0.62137;
        System.out.println("Distance in Mile is "+M);
        break;

    case 3:
        System.out.println("Enter Distance in Inches");
        I=Double.parseDouble(br.readLine());
        M=I*0.0254;
        System.out.println("Distance in Meter is "+M);
        break;

    case 4:
        System.out.println("Enter Distance in Mile");
        M=Double.parseDouble(br.readLine());
        I=M*63360;
        System.out.println("Distance in Inches is "+I);
        break;

    case 5:
        System.out.println("Enter Distance in Centimeter");
        CM=Double.parseDouble(br.readLine());
        M=CM*.01;
        System.out.println("Distance in Meter is "+M);
        break;

    case 6:
        System.out.println("Enter Distance in Meter");
        M=Double.parseDouble(br.readLine());
        CM=M*100;
        System.out.println("Distance in Centimeter is "+CM);
        break;

    default :
        System.out.println("Wrong choice. It should be 1 to 6");
} //end of Distance choice
break;
case 3: //start of Volume menu
System.out.println("1. Litres to Gallons");
System.out.println("2. Gallons to Litres");
System.out.println("3. Litres to Millilitres");
System.out.println("4. Millilitres to Litres");

System.out.println("Enter your choice (1-4)");
choice2=Integer.parseInt(br.readLine());
switch(choice2)
{
    case 1:
        System.out.println("Enter Volume in Litres");
        L=Double.parseDouble(br.readLine());
        GL=L*0.26417;
        System.out.println("Volume in Gallons(US) is "+GL);
        break;

    case 2:
        System.out.println("Enter Volume in Gallons(US)");
        GL=Double.parseDouble(br.readLine());
        L=GL*3.78541;
        System.out.println("Volume in Litres is "+L);
        break;

    case 3:
        System.out.println("Enter Volume in Litres");
        L=Double.parseDouble(br.readLine());
        ML=L*1000;
        System.out.println("Volume in Millilitres is "+ML);
        break;

    case 4:
        System.out.println("Enter Volume in Millilitres");
        ML=Double.parseDouble(br.readLine());
        L=ML*.001;
        System.out.println("Volume in Litres is "+L);
        break;

    default :
        System.out.println("Wrong choice. It should be 1 to 4");
} //end of Volume choice

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        break;
    default :
        System.out.println("Wrong choice. It should be 1 to 3");
    } //end of main menu choice
} //end of calculation function

public void main()throws IOException
{
    inputmenu();    //invoking inputmenu function
                  //no need to invoke calculation(). It has already called from inputmenu()
} //end of main()
} //end of class
```