**import** java.util.Scanner;

**public** **class** main {

**public** **static** **void** verify(){

**double** lengthOfStick, ExpactedLength = 1.00000;

Scanner input = **new** Scanner(System.***in***);

System.***out***.print("What is a lenght of meter stick");

lengthOfStick = input.nextDouble();

**double** Tolrance = Math.*abs*(lengthOfStick - ExpactedLength);

**if**(Tolrance <= 0.0001) { System.***out***.print("The length of stick is within the tolrance"); }

**else** System.***out***.print("The length of stick is not within the tolrance" + " "+Tolrance);

}

**public** **static** **void** Menu(){

System.***out***.print("\n /n");

}

**public** **static** **void** main(String[] args) {

// FIRST

**double** lengthOfStick, ExpactedLength = 1.00000;

Scanner input = **new** Scanner(System.***in***);

System.***out***.print("What is a lenght of meter stick");

lengthOfStick = input.nextDouble();

**double** Tolrance = Math.*abs*(lengthOfStick - ExpactedLength);

**if**(Tolrance <= 0.0001) { System.***out***.print("The length of stick is within the tolrance" + " "+Tolrance +"\n"); }

**else** System.***out***.print("The length of stick is not within the tolrance" + " "+Tolrance +"\n");

// SECOND

**int** CheakTolrance = 1,Convertintomillimeter = 3,Printreport = 4 ;

**int** Convertintocentimeter =2;

Scanner input2 = **new** Scanner(System.***in***);

System.***out***.print("1. Cheak Tolrance\n"

+ "2. Convert into centimeter\n"

+ "3. Convert into millimeter\n"

+ "4. Print report");

System.***out***.print("\n Enter the number of process you want.");

**int** NumberOfOpration;

NumberOfOpration = input.nextInt();

**if**(NumberOfOpration == Convertintocentimeter ){

System.***out***.print("The length of meter stick in centimeter is"+" "+ lengthOfStick\*100 +"\n"); }

**else** **if**(NumberOfOpration == Convertintomillimeter){

System.***out***.print("The length of meter stick in millimeter is"+" "+ lengthOfStick\*1000); }

**else** **if**(NumberOfOpration == Printreport){

System.***out***.print("The length of meter stick is"+" "+ lengthOfStick); }

//else if(NumberOfOpration == CheakTolrance){

// System.out.print("The length of meter stick is"+" "+ lengthOfStick); };;

**else** System.***out***.print("The value is invalid") ;

}

}

**public** **class** MeterStick {

**public** **static** **final** **double** ***EXPECTED\_LENGTH*** = 1.0; // meters

**public** **static** **final** **double** ***EPSILON*** = 0.0001;

**private** **double** length;

**double** Tolrance;

/\*

\* Constructor comments here

\*/

**public** MeterStick() {

**this**(***EXPECTED\_LENGTH***);

}

/\*

\* Constructor comments here

\*/

**public** MeterStick(**double** length) {

**this**.length = length;

}

/\*

\* method comment goes here

\*/

**public** **double** getLength() {

**return** length;

}

/\*

\* method comment goes here

\*/

**public** **void** setLength(**double** length) {

**this**.length = length;

}

/\*

\* method comment goes here

\*/

**public** **double** toCentimeters() {

**double** centimeters;

centimeters = length \* 100;

**return** centimeters;

}

/\*

\* method comment goes here

\*/

**public** **double** toMillimeters() {

**double** millimeters;

millimeters = length \* 1000;

**return** millimeters;

}

/\*

\* method comment goes here

\*/

**public** String toString() {

String report;

report = "The length of meter stick is"+" "+ length;

**return** report;

}

/\*

\* method comment goes here

\*/

**public** **double** verify() {

**double** Tolrance = Math.*abs*(length - ***EXPECTED\_LENGTH***);

**if**(verify() <= 0.0001) { System.***out***.print("The length of stick is within the tolrance" + " " + verify() +"\n"); }

**else** System.***out***.print("The length of stick is not within the tolrance" + " "+Tolrance +"\n");

**return** Tolrance;

}

}