Assessment: Assessment 02

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Lab Section Number: *342*

Due Date: November 25

# Task 1 – UML Class Diagram

Text

Description automatically generated

Table

Description automatically generated

Graphical user interface, text, application

Description automatically generated with medium confidence

A picture containing application

Description automatically generated

# Task 2 – Pseudocode, Flowcharts

# Pseudocode

Public static isDiameterInTolerance() of class CircularSawBladeVerifier

boolean isDiameterInTolerance(CircularSawBlade blade)

declarations

num tolerance

tolerance = Math.abs(blade.getDiameter() - CircularSawBlade.EXPECTED\_DIAMETER)

if (tolerance <= EPSILON) then

return true

else

return false

endif

public static isKerfInTolerance() of class CircularSawBladeVerifier

boolean isKerfInTolerance(CircularSawBlade blade)

declarations

num tolerance

tolerance = Math.abs(blade.getKerf() - CircularSawBlade.EXPECTED\_KERF)

if (tolerance <= EPSILON) then

return true

else

return false

endif

public static inputPositiveDouble(String prompt) of class User

double inputPositiveDouble(String prompt)

declarations

boolean isInputBad = true

num value

while (isInputBad)

value = inputDouble(prompt)

if (value > 0.0) then

isInputBad = false

else

output "Enter positive number only."

endif

endwhile

return value

Public static void main(String[] args) of class Assignment02

start

declarations

num countBlades

num countDiametersOutOfTolerence

num coundKerfOutfTolerence

string nextLoop = “YES”

num diameter

num kerf

String promptMessage

while (nextLoop.equalsIgnoreCase(”YES”))

promptMessage = "Enter measured diameter: "

diameter = User.inputPositiveDouble(promptMessage)

blade.setDiameter(diameter)

promptMessage = "Enter measured kerf: "

kerf = User.inputPositiveDouble(promptMessage)

blade.setKerf(kerf)

output blade.toString()

if (CircularSawBladeVerifier.isDiameterInTolerance(blade)) then

output “Diameter in tolerance”

else

output “Diameter out of tolerance”

countDiametersOutOfTolerence++

endif

if (CircularSawBladeVerifier.isKerfInTolerance(blade)) then

output “Kerf in tolerance”

else

output “Kerf out of tolerance”

countkerfOutOfTolerence++

endif

output “Blades Entered:” + countBlades

output “Diameter(s) out of tolerance:” + countDiameterOutOfTolerence

output “Kerf(s) out of tolerance:” + countKerfOutOfTolerence

output “Program by Fei Lan”

promptMessage = “Continue (yes/no)?”

nextLoop = User.inputString(promptMessage)

endwhile

stop

# Flowcharts

Diagram

Description automatically generated

Diagram

Description automatically generated

Diagram

Description automatically generated

Diagram

Description automatically generated

# Task 3 – Algorithm Test Plan

Expected values, in tolerance and less than expected, in tolerance bigger than expected,

Out tolerance and bigger, out tolerance and smaller

Diameter in tolerance and kerf out of tolerance, diameter out of tolerance and kerf in tolerance

Diameter and kerf are 0, diameter and kerf are negative, diameter and kerf are strings

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Expected Output | Actual Output | Description |
| 7.25  0.059  yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500, width: 0.0590  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500, width: 0.0590  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Diameter and kerf output 4 decimals as formatted.  Both diameter and kerf have expected values and are in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct with 0.  All output messages are correct.  The algorithm continues.  The algorithm logic works as expected. |
| 42  42  YES | Enter measured diameter:  Enter measured kerf:  diameter: 42.0000, width: 42.0000  Diameter out of tolerance.  Kerf out of tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 1  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 42.0000, width: 42.0000  Diameter out of tolerance.  Kerf out of tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 1  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Diameter and kerf output 4 decimals as formatted.  The count of blades entered is correct.  Both diameter and kerf are out of tolerance, and the count of diameters and count of kerfs out of tolerance increase by 1.  All output messages are correct.  The algorithm continues.  The algorithm works as expected. |
| -5  7.25  Tuna  0.5  no | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2500, width: 0.5000  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)? | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2500, width: 0.5000  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)? | The algorithm prevents negative number for number, and also prevents text for number.  The count of blades entered is correct.  The diameter is in tolerance, and  the count of diameters out of balance is not changed.  The kerf is out of tolerance, and the count of kerfs out of tolerance increases by 1.  All output messages are correct.  The algorithm stops.  The algorithm works as expected. |
| 7.24  0.059  Yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2400 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2400 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is less than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance.  The algorithm continues.  The algorithm works as expected. |
| 7.26  0.059  Yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is bigger than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance  The algorithm continues.  The algorithm logic works as expected. |
| 7.25  0.05  YEs | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The kerf is less than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance.  The algorithm continues.  The algorithm logic works as expected. |
| 7.25  0.06  carrot | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)? | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)? | The kerf is bigger than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance  The algorithm stops.  The algorithm logic works as expected. |
| 6.00  0.059  YeS | Enter measured diameter:  Enter measured kerf:  diameter: 6.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 6.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is less than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 8.0  0.059  yeS | Enter measured diameter:  Enter measured kerf:  diameter: 8.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 8.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is bigger than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 7.25  0.01  yeS | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0100 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 1  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0100 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 1  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The kerf is less than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 7.25  0.5  yES | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.5000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.5000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The kerf is bigger than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 0  7.25  0.059  yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 5  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 5  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | 0 is not valid for diameter which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 7.25  0  0.059  yes | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 72.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 6  Diameter(s) out of tolerance: 3  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 72.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 6  Diameter(s) out of tolerance: 3  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | 0 is not valid for kerf which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| -7.5  7.5  0.059  YES | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  diameter: 7.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 7  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  diameter: 7.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 7  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Negative number is not valid for diameter which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 7.25  -1  1.0  yes | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 7.2500 (inch), width: 1.0000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 8  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 7.2500 (inch), width: 1.0000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 8  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Negative number is not valid for kerf which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| Hello  7.26  0.06  yes | Enter measured diameter:  Invalid input. Enter a number:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 9  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Invalid input. Enter a number:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 9  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Text is not valid for diameter which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm continues.  The algorithm logic works as expected |
| 7.24  Tuna  0.05  stop | Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2400 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 10  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)? | Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2400 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 10  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)? | Text is not valid for kerf which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The algorithm stops.  The algorithm logic works as expected |

# Task 4 – Program Test Plan

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Expected Output | Actual Output | Description |
| 7.25  0.059  yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500, width: 0.0590  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500, width: 0.0590  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Diameter and kerf output 4 decimals as formatted.  Both diameter and kerf have expected values and are in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct with 0.  All output messages are correct.  The program continues.  The program logic works as expected. |
| 42  42  YES | Enter measured diameter:  Enter measured kerf:  diameter: 42.0000, width: 42.0000  Diameter out of tolerance.  Kerf out of tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 1  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 42.0000, width: 42.0000  Diameter out of tolerance.  Kerf out of tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 1  Program by Fei Lan  continue(yes/no)?  enter measured diameter: | Diameter and kerf output 4 decimals as formatted.  The count of blades entered is correct.  Both diameter and kerf are out of tolerance, and the count of diameters and count of kerfs out of tolerance increase by 1.  All output messages are correct.  The program continues.  The program logic works as expected. |
| -5  7.25  Tuna  0.5  no | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2500, width: 0.5000  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)? | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2500, width: 0.5000  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)? | The program prevents negative number for number, and also prevents text for number.  The count of blades entered is correct.  The diameter is in tolerance, and  the count of diameters out of balance is not changed.  The kerf is out of tolerance, and the count of kerfs out of tolerance increases by 1.  All output messages are correct.  The program stops.  The program logic works as expected. |
| 7.24  0.059  Yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2400 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2400 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is less than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance.  The program continues.  The program logic works as expected. |
| 7.26  0.059  Yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is bigger than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance  The program continues.  The program logic works as expected. |
| 7.25  0.05  YEs | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The kerf is less than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance.  The program continues.  The program logic works as expected. |
| 7.25  0.06  carrot | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)? | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 0  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)? | The kerf is bigger than the expected value and in tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are not changed because diameter and kerf are in tolerance  The program stops.  The program logic works as expected. |
| 6.00  0.059  YeS | Enter measured diameter:  Enter measured kerf:  diameter: 6.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 6.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 1  Diameter(s) out of tolerance: 1  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is less than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| 8.0  0.059  yeS | Enter measured diameter:  Enter measured kerf:  diameter: 8.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 8.0000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 2  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 0  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The diameter is bigger than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| 7.25  0.01  yeS | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0100 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 1  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0100 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 3  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 1  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The kerf is less than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| 7.25  0.5  yES | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.5000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.5000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 4  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | The kerf is bigger than the expected value and out of tolerance.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected.. |
| 0  7.25  0.059  yes | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 5  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  diameter: 7.2500 (inch), width: 0.0590 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 5  Diameter(s) out of tolerance: 2  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | 0 is not valid for diameter which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| 7.25  0  0.059  yes | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 72.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 6  Diameter(s) out of tolerance: 3  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 72.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 6  Diameter(s) out of tolerance: 3  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | 0 is not valid for kerf which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| -7.5  7.5  0.059  YES | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  diameter: 7.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 7  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter positive number only.  Enter measured diameter:  Enter measured kerf:  diameter: 7.5000 (inch), width: 0.0590 (inch)  Diameter out of tolerance.  Kerf in tolerance.  Blades Entered: 7  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 2  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Negative number is not valid for diameter which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| 7.25  -1  1.0  yes | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 7.2500 (inch), width: 1.0000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 8  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Enter measured kerf:  Enter positive number only.  Enter measured kerf:  diameter: 7.2500 (inch), width: 1.0000 (inch)  Diameter in tolerance.  Kerf out of tolerance.  Blades Entered: 8  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Negative number is not valid for kerf which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| Hello  7.26  0.06  yes | Enter measured diameter:  Invalid input. Enter a number:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 9  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Enter measured diameter:  Invalid input. Enter a number:  Enter measured kerf:  diameter: 7.2600 (inch), width: 0.0600 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 9  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)?  Enter measured diameter: | Text is not valid for diameter which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |
| 7.24  Tuna  0.05  stop | Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2400 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 10  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)? | Enter measured diameter:  Enter measured kerf:  Invalid input. Enter a number:  diameter: 7.2400 (inch), width: 0.0500 (inch)  Diameter in tolerance.  Kerf in tolerance.  Blades Entered: 10  Diameter(s) out of tolerance: 4  Kerf(s) out of tolerance: 3  Program by Fei Lan  Continue (yes/no)? | Text is not valid for kerf which only accepts positive number.  The count of blades entered is correct.  The count of diameters and count of kerfs out of tolerance are correct.  The program continues.  The program logic works as expected. |

# Task 5 – Java Program Screen Shot

Graphical user interface, text, application, email

Description automatically generated