Jeremy Scheuerman

Doctor Spickler

COSC 117

9 April 2019

Homework 7 logic

1. WANT: Rectangle info

HOW: Using an object call to deal with all variable declarations and equations instead of having it all in the main class

NEED: User input to do equations

Output

-1

Input height and width of Rectangle #1: 5 5

Input height and width of Rectangle #2: 4 7

Rectangle Data: Width = 5.0 Height = 5.0

Rectangle Data: Width = 7.0 Height = 4.0

Rectangle 1

Height: 5.0

Width: 5.0

Area: 25.0

Perimeter: 20.0

The rectangle is a square.

Rectangle 2

Height: 4.0

Width: 7.0

Area: 28.0

Perimeter: 22.0

The rectangle is not a square.

Rectangle 1

Height: 17.0

Width: 17.0

Area: 289.0

Perimeter: 68.0

The rectangle is a square.

-2

Input height and width of Rectangle #1: 20 23

Input height and width of Rectangle #2: 32 45

Rectangle Data: Width = 23.0 Height = 20.0

Rectangle Data: Width = 45.0 Height = 32.0

Rectangle 1

Height: 20.0

Width: 23.0

Area: 460.0

Perimeter: 86.0

The rectangle is not a square.

Rectangle 2

Height: 32.0

Width: 45.0

Area: 1440.0

Perimeter: 154.0

The rectangle is not a square.

Rectangle 1

Height: 17.0

Width: 17.0

Area: 289.0

Perimeter: 68.0

The rectangle is a square.

-3

Input height and width of Rectangle #1: 3 3

Input height and width of Rectangle #2: 4 8

Rectangle Data: Width = 3.0 Height = 3.0

Rectangle Data: Width = 8.0 Height = 4.0

Rectangle 1

Height: 3.0

Width: 3.0

Area: 9.0

Perimeter: 12.0

The rectangle is a square.

Rectangle 2

Height: 4.0

Width: 8.0

Area: 32.0

Perimeter: 24.0

The rectangle is not a square.

Rectangle 1

Height: 17.0

Width: 17.0

Area: 289.0

Perimeter: 68.0

The rectangle is a square.

1. WANT: Properties of a circle

HOW: using a separate circle object to deal with methods equations and function calls

NEED: user input

Output

-1

Properties

Center = (2.0, 3.0)

Radius = 2.0

Circumfrence = 12.566370614359172

Area = 12.566370614359172

Properties

Center = (4.0, 5.0)

Radius = 1.0

Circumfrence = 6.283185307179586

Area = 3.141592653589793

Properties

Center = (0.0, 0.0)

Radius = 3.0

Circumfrence = 18.84955592153876

Area = 28.274333882308138

true

true

false

-2

Input the X coordinate of the center: 0

Input the Y coordinate of the center: 0

Input the radius: 8

Properties

Center = (0.0, 0.0)

Radius = 8.0

Circumfrence = 50.26548245743669

Area = 201.06192982974676

Properties

Center = (2.0, 3.0)

Radius = 2.0

Circumfrence = 12.566370614359172

Area = 12.566370614359172

Properties

Center = (4.0, 5.0)

Radius = 1.0

Circumfrence = 6.283185307179586

Area = 3.141592653589793

Properties

Center = (0.0, 0.0)

Radius = 3.0

Circumfrence = 18.84955592153876

Area = 28.274333882308138

true

true

false

-3

Input the X coordinate of the center: 5

Input the Y coordinate of the center: 2

Input the radius: 7

Properties

Center = (5.0, 2.0)

Radius = 7.0

Circumfrence = 43.982297150257104

Area = 153.93804002589985

Properties

Center = (2.0, 3.0)

Radius = 2.0

Circumfrence = 12.566370614359172

Area = 12.566370614359172

Properties

Center = (4.0, 5.0)

Radius = 1.0

Circumfrence = 6.283185307179586

Area = 3.141592653589793

Properties

Center = (0.0, 0.0)

Radius = 3.0

Circumfrence = 18.84955592153876

Area = 28.274333882308138

true

true

false

1. WANT: Student report generator grade calculations and all that

HOW: a lot of time, and methods calling from student object to deal with getting and setting variables

NEED: a lot of user input

Output

-1

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 1

Input Student's First Name: John

Input Student's Last Name: Doe

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 2

Input Student's ID: 6654365

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 1

Score: 23

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 2

Input Student's ID: 2542542

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 2

Score: -1

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 3

Score: 234

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 4

Final Exam Score: 198

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 5

Exam Average = 41.0

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 6

Target Average : 87

Final exam score needed to have a 87.0%

at the end of the course is 174.0 out of 200

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 7

Student Progress Report: Doe, John (2542542)

Exam Scores

Exam 1 = 23.0

Exam 2 = 0.0

Exam 3 = 100.0

Final = 198.0

Average = 64.2

Letter Grade = D

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 8

-2

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 1

Input Student's First Name: Joey

Input Student's Last Name: Scheuerman

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 2

Input Student's ID: 43242

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 1

Score: 98

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 2

Input Student's ID: 543

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 2

Score: 45

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 3

Score: 69

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 4

Final Exam Score: 199

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 5

Exam Average = 70.66666666666667

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 6

Target Average : 76

Final exam score needed to have a 76.0%

at the end of the course is 152.0 out of 200

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 7

Student Progress Report: Scheuerman, Joey (543)

Exam Scores

Exam 1 = 98.0

Exam 2 = 45.0

Exam 3 = 69.0

Final = 199.0

Average = 82.2

Letter Grade = B

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 8

-3

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 1

Input Student's First Name: Stanley

Input Student's Last Name: Ipkiss

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 2

Input Student's ID: 594563

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 2

Score: 45

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 1

Score: 99

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 3

Exam Number: 3

Score: 100

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 4

Final Exam Score: 200

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 5

Exam Average = 81.33333333333333

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 6

Target Average : 1

You already have enough points for a 1.0%.

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 7

Student Progress Report: Ipkiss, Stanley (594563)

Exam Scores

Exam 1 = 99.0

Exam 2 = 45.0

Exam 3 = 100.0

Final = 200.0

Average = 88.8

Letter Grade = B

Please select from the following Menu:

1. Input Student Name

2. Input Student ID

3. Input Exam Score

4. Input Final Exam Score

5. Print Exam Average without the Final Exam

6. Calculate Final Exam Projection

7. Print Student Report

8. Quit

Selection: 8