Langara
THE COLLEGE OF HIGHER LEARNING.

Department of Computing Science & Information Systems
CPSC 1181
Lab#7
October 22, 2019
Objectives:

Inheritance
Interfaces
Polymorphism
Event Handling

Preparation:

Study chapters EventHandling and polymorphism.

Due date:

Due Date: 11:00 PM on Monday October 28, 2019

Where to upload:

Copy all source code into folder lab7, then zip folder to yourStudentID.zip and upload it to Lab6 in D2L.

What to do:

Develop a Java program that draws circles by user mouse clicks based on the following specifications:

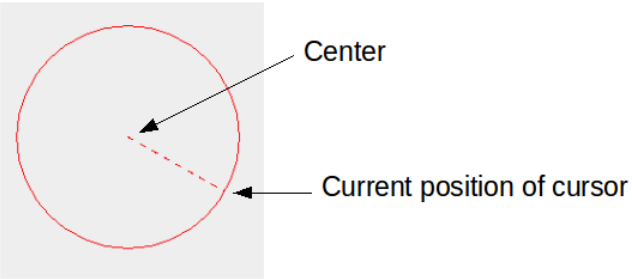
1. The first mouse click specifies the center of the circle.

2. After selecting the center of the circle (previous step), a circle and a line that connects the center of the circle to the current position of the mouse on the screen are displayed.

- Use red color for both circle and the line
- Use dashed-line to show the line
- You can use following Java code to create dash line:

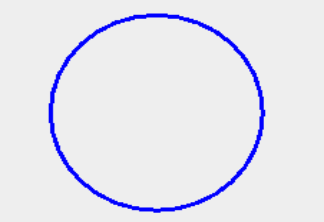
```
BasicStroke dashed = new BasicStroke(1, BasicStroke.CAP_BUTT,
BasicStroke.JOIN_BEVEL, 0, new float[]{6}, 0);
```

Note that the size of the circle changes as you move the cursor on the screen.

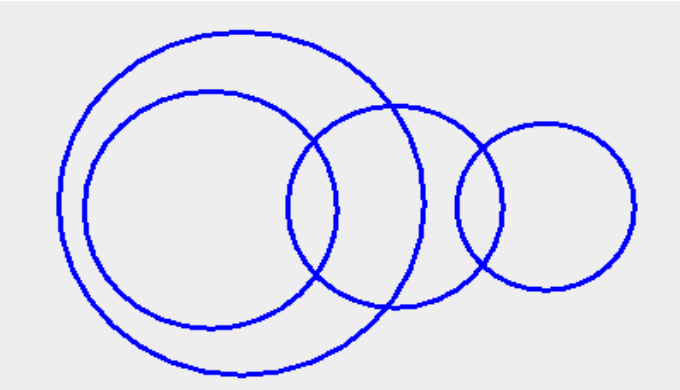


3. The second mouse click creates the circle and adds it to an ArrayList and displays it in blue color, and then cycles repeats.

Note that the radius of the circle is not shown after creation.



4. User can create as many as circles as s/he wants.



5. The circles are stored in an `ArrayList` and are displayed in the `paintComponent(Graphics g)` of the Jcomponent.

Notes:

1. Create any other classes that you need.

2. All circles should be displayed on the screen ofter moving and resizing the frame.

3. You are free either to create a class Circle or just use Ellipse2D in your implementation.

Check the sample.mp4 file for sample run of the program.

What to upload:

Do not forget to use javadoc comment to comment all your methods and classes.
If you do the bonus part, then you should upload two folders, one for the main chess program and another chess_gui_mouse. Zip both folders into your yourStudentId.zip and upload it.

Total mark: 60

Bonus: [15 marks]

If you have done the graphical bonus part of the chess program, then you can continue your previous work and add more functionality to your chess program.
In this part you are asked to move the chess pieces by mouse click.

Check chess.mp4 for sample run of the program. Your program should follow the same functionality as shown in the mp4 file.