PROG 1400 - ASSIGNMENT 4

OOP AND GUI

Assignment Value: *15%* of overall course mark. Published date: Nov 27, 2023.

Due Date: **See due dates designated on the Assignment 4 dropboxe(s) on Brightspace.**

Tuesday Dec 12 @ 11:59 pm.

Assignment Instructions:

Use IntelliJ to create a Java Swing UI application. You will also design your solution using a UML class diagram that just contains the Animal, Dog, Cat, and Lion classes with their contents and the inheritance relationship.

(10 points)

Submissions:

You will submit your work for this assignment via Brightspace. **All files required to run the project (Main(), external files/folders like images, text files, etc.) must be included in the Dropbox.** Also, another submission via GitHub classroom.

Evaluation:

To ensure the greatest chance of success on this assignment, be sure to check the marking rubric contained in the assignment's instructions and at the end of this document. The rubric contains the criteria your instructor will be assessing when marking your assignment.

Program – Animal At A Zoo App

DESIGN AND CODING

Prior to coding the application, you should work out a design for the objects in your application. This will be diagrammed using Visio or another software. For example, each class in the App (either Cat or Dog) shares common attributes. Make sure your classes do not duplicate any code by using Java inheritance to share these common attributes and methods. Upload the Visio diagram as a JPEG or PNG along with your source code.

PROGRAM REQUIREMENTS

Check the posted walkthrough video in Brightspace "Assignment4 Module".

Screen Descriptions

Check the posted walkthrough video in Brightspace "Assignment4 Module".

Program Structure

Your program must use inherited classes for the program JFrame and each of the two screens (as JPanels). It should contain the following classes and packages:

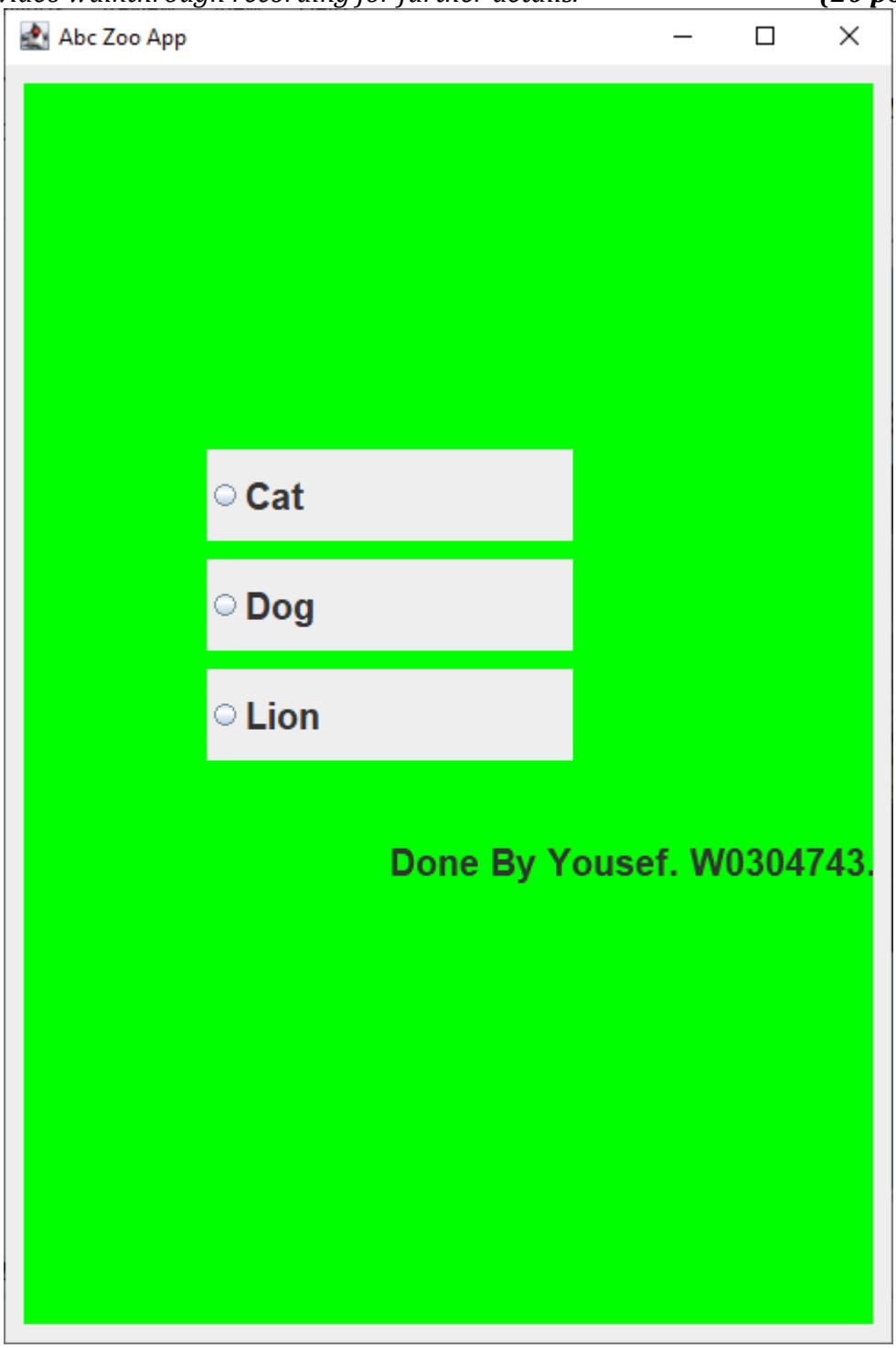
1. Main Class. It has the proper calling statement for the inheritedGUI class. **(3 points).**
2. Animal Class. For its content, consult our comprehensive example (Animal At A zoo), and the video walkthrough. **(5 points).**
3. Cat Class. For its content, consult our comprehensive example (Animal At A zoo), and the video walkthrough. **(5 points).**
4. Dog Class. For its content, consult our comprehensive example (Animal At A zoo), and the video walkthrough. **(5 points).**
5. Lion Class. For its content, consult our comprehensive example (Animal At A zoo), and the video walkthrough. **(5 points).**
6. InheritedGUI Class **(1.5 points).**
7. Image package (**1.5 points).**

Each of your classes should make proper use of constructors, getter and setter methods, as well as any standard methods you deem necessary. **(5 points)**

Your solution should also include at least one example of an abstract class and at least one abstract method, at least one example of overriding methos. **(5 points)**

SAMPLE SCREENSHOTS

First Screen. Should contain the following control objects and their proper ActionListeners. Consult the video walkthrough recording for further details. ***(20 points)***



SEcond Screen. Should contain the following control objects and their proper ActionListeners. Consult the video walkthrough recording for further details. ***(20 points)***

Note: I used the following font Class constructor:

```
Font fontName = new Font("Courier", Font.BOLD, 20);
```

RPG Character Creation

Name: _____

Criteria	Insufficient (0 pts)	Needs Improvement (1-2 pts)	Sufficient (3-4 pts)	Excellent (5 pts)	Mark	X
Class Diagram	Submission missing entirely, or it contains too many issues and/or omissions.	An effort was made, but submission has multiple issues, major issues, or omissions.	A good effort, but submission has a few issues and/or areas for improvement.	Submission demonstrates a strong understanding of class diagram concepts, meets all requirements and fully covers the expected scope of the program. Proper UML notation is used throughout. Displays a high level of analysis, planning and attention to detail. Submission is well-formatted, proofread and presentable.		x2
The included rubric with each instruction. Check the above assignment's instructions					75	
Video Recording	Little to no effort was made.	Explained the regular classes and GUI classes only	1.Explained the regular classes and GUI classes. 2. Explained the getters and setters methods.	Explain in your video recording the following: 1. The regular classes and the GUI classes. 2. Getters and setters methods for one of classes of your own choice. 3. The logical flow of your program: starting from the main class and then all classes.		3
			Total:		**/100**	

All the Best!