PROBLEM **4.2.3**

Game Improvements

INTRODUCTION

As it stands after your work in Unit 4, there isn't much to do in Emu On The Loose. For this problem, you will design improvements to the game to make it more interesting.

Materials

- Computer with Android™ Studio
- Android™ tablet and USB cable, or device emulator

RESOURCES

Problem 4.2.3 Rubric
Resources available online

Procedure

Part I: Game Improvements

1. Form pairs or teams as directed by your instructor.
2. From the two lists below, select one sprint task list item to complete. Many of the tasks listed can make use of graphics found in the texture atlas for the game.
   - If you finish before the end of work time, select another task to complete.
   - If you choose to design your own improvement(s) to the game, be sure to consult with your instructor about how much time that improvement is likely to take and its relative complexity.
   - You may need to complete multiple tasks to meet your instructor's requirements for work on this problem.

Moderate Time Commitment Items

1. Add conversation bubbles on interaction with certain objects. The conversation bubbles should display in the upper-left corner of the screen.
2. Allow the player character to push desks around.
3. Cause the Emu to move autonomously.
4. Create an improvement of your own design.

Significant Time Commitment Items

1. Add the ability for the player character to interact with the walls.
2. Add the ability for the player character to walk through open doors.
3. Add a multi-tile object like shelving units, cubbies, or a teacher desk to the game.
4. Add artificial intelligence to the Emu so that it can evade the player character.
5. Add an inventory for the player character, so that it can pick up objects. Display the inventory in the lower-left corner of the screen.
6. Create an improvement of your own design.

Problem 4.2.3 Rubric

RESOURCES

4.2.3 Problem Rubric
Resources available online

Use this rubric with Problem 4.2.3 Game Improvements.

Criteria	4	3	2	1	Total
Model-View-Controller (MVC) Pattern	The student provides accurate information about the modifications that were made to each layer of the application to complete their task.	The student provides mostly accurate information about the modifications that were made to each layer of the application to complete their task.	The student provides somewhat accurate information about the modifications that were made to each layer of the application to complete their task.	The student provides minimally accurate information about the modifications that were made to each layer of the application to complete their task.	
	The student provides thorough information about the modifications that were made to each layer of the application to complete their task.	The student provides mostly thorough information about the modifications that were made to each layer of the application to complete their task.	The student provides somewhat thorough information about the modifications that were made to each layer of the application to complete their task.	The student provides incomplete information about the modifications that were made to each layer of the application to complete their task.	

Criteria	4	3	2	1	Total
2D Data Structures	The student is thorough in their description of how the implementation for their task accesses and modifies data in two dimensions.	The student is mostly thorough in their description of how the implementation for their task accesses and modifies data in two dimensions.	The student is somewhat thorough in their description of how the implementation for their task accesses and modifies data in two dimensions.	The student is not thorough in describing how the implementation for their task accesses and modifies data in two dimensions.	
Completion	The student implemented a solution to the task that is complete.	The student implemented a solution to the task that is mostly complete.	The student implemented a solution to the task that is somewhat complete.	The student implemented a solution to the task that is minimally complete.	