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Creative Coding: ASIM 1310-801C

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Final Project: Snake Game

Procedure:

To develop the snake game, I have created two classes which implement inheritance. The superclass is Board and the subclass is Snake. Features of the method of display for the board, modeled by the function `displayBoard ()`, also play a role in the manner in which the snake is displayed on the board. The `ArrayList` class is used to efficiently add objects to the snake in the Snake class. Functions for the movement of the snake (`moveSnake ()`), the display of the apples (`displayApple ()`), display of a screen with the score and instructions to play again upon the detection of a loss (`lossScreen ()`), and the resetting of the game when the spacebar is pressed (`resetBoard ()`) have been implemented in the Snake class. The main program contains the `minim` audio extension, instantiates objects Board, Snake, m (for Minim), and p (for AudioPlayer). The audio file for the bite sound effect, which is implemented in the Snake class every time the snake “eats” an apple, is loaded in the main program in the setup function. In the draw function display functions for the board and the snake are called.

Instructions for Use:

The objective of this game is to have your snake eat apples to grow in size, and to attempt to reach a great length without dying. To move the snake towards the apple, the user will use the up, down, right, and left keyboard arrows. To gain points and length, apples must be eaten (you will know you have eaten an apple as a crunch sound effect will play). Collision with the snake's

body (occurs when attempting to move backwards after the first apple is eaten or running the snake into its own body) and the edges of the screen result in a loss. Upon losing, a screen will appear with your score, which is equivalent to the apples eaten, and instructions to play again. To play again, press the space bar and the game will be reset to a score of zero.

Brief recap:

- Objective: eat as many apples as possible to grow in length
- Keys for movement: up, down, left, and right arrows
- Loss occurs when the snake runs into its own body or moves backwards after the first apple is eaten.
- When game is lost, the score will be displayed, and the game can be reset by pressing the spacebar

Enjoy!