Period 7
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1. Description

GROUP NAME: FROGGER
PROJECT NAME: FROGGER
Description:
The game is a modern interpretation of the classic arcade game Frogger. Players take control of a cute frog and must guide it safely across a busy road and treacherous rivers to reach its destination. The game screen is divided into lanes, each filled with speeding cars or floating logs. The frog can move horizontally and vertically, avoiding collisions with vehicles and utilizing the logs as stepping stones to cross the rivers. With smooth graphics and intuitive controls, players must demonstrate quick reflexes and strategic thinking to navigate through increasingly challenging levels. The objective is to accumulate the highest score possible by successfully crossing the obstacles and reaching the destination. It's a test of skill, timing, and precision, offering an exciting and nostalgic gaming experience for players of all ages.

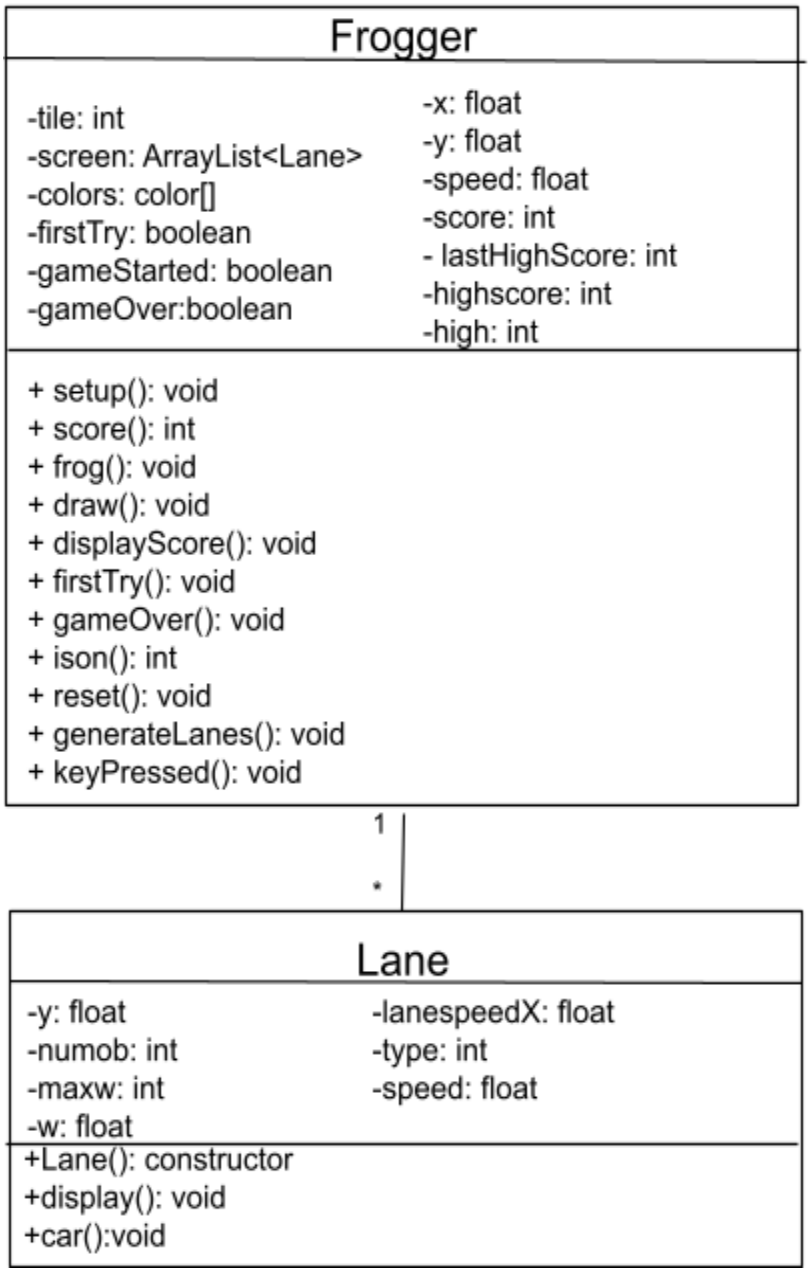
2. Log

Spencer: Implemented collisions, main draw method, and lane generation–including different types of lanes, random generation of lanes, and placement and speed of obstacles.

Jason: Implemented collisions and final design of the frog using processing to generate each individual part of the frog–body, legs, face, mouth, and eyes.

Jay: Implemented lane generation, movement, and display functionalities–including the starting screen, game over screen, high score, and the scoreboard.

3. UML Diagram



4. How does it work?

Game Objective: The objective of the game is to guide the frog across the screen, avoiding moving cars and water, and reach the other side safely.

Controls: You can control the frog's movement using the arrow keys (UP, DOWN, LEFT, RIGHT) or the WASD keys. The frog can move up, down, left, and right to avoid the obstacles. We also added a feature that uses Q and E which moves diagonally so you could get out of situations that would otherwise be impossible.

Gameplay: The game starts with the frog positioned at the bottom of the screen. The player must navigate the frog across the screen by avoiding collisions with moving cars and logs.

Cars and Logs: The screen is divided into lanes, and cars move horizontally in some lanes, while logs move horizontally in others. The player needs to time their movements and carefully cross the lanes without getting hit.

Scoring: The game keeps track of your score. Every time you move up the screen, your score grows higher and higher. The objective is to score the highest number of points you can get.

Game Over: The game ends if the frog collides with a car or falls into the water by not landing on a log. The player can restart the game by pressing any key.

High Score: The game keeps track of the high score. After each game is over, if your score beats the previous high score, it will be updated accordingly.