CPSC 386: Introduction to Game Design and Production

Final Project, **Crossy Road**

In this assignment, you will recreate the classic Crossy Road game, using the Unreal 5 Engine and static meshes and materials created Blender, MagicaVoxel or downloaded from other sites. The audio resources you will need can be captured using an audio editor such as Audacity, recording YouTube audios of the Crossy Road game.

OBJECT OF THE GAME:

Cross as many lanes as possible without being killed by a car, truck, train, drowning, or an eagle. There is only one level, but it is dynamic and keeps being created in front of you, and destroyed behind you.

The level is made up of alternating safe areas and obstacles with either vehicles that can strike you, or water you can fall into. You can pause and wait for a safe interval to cross the obstacles -- but not too long, or an eagle will swoop down and pick you off.

Lanes start off just one or two lanes at a time (grass, unmarked highway, RR, grass, river, …) but gets harder as you cross more lanes, 5 lanes, 10 lanes, 15 lanes, … It gets much harder to cross a 15 lane highway than 1 lane.

Safe areas are grass. Unsafe areas are rivers, highways, and railroads.

Cars, trucks, logs, and trains come from both directions. The chicken can use the logs to cross the river.

List of objects needed:

- Chicken, Eagle
- Grass, Highways, Rivers, and Railroads.
- Trees, bushes, rocks for the grass areas, they don't have to move, but can move if you wish! You can create trees from scratch using Blender, or import them. Consider having some Palm trees!
- Cars/trucks for the highways. They can be simple, or created/imported such as a Bugatti or Lamborghini or Dodge muscle car.
- Train for the Railroad, and RR crossings with lights and bells (the lights must be able to alternate).
- Logs and lily pads for the river: the lily pads don't move though.
- Coins to pick up.
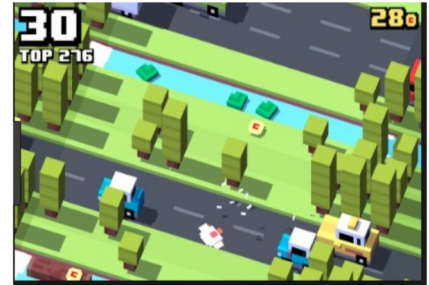
The number of steps taken (in white) and the number of coins collected (yellow) is shown in the scoreboard at the top. Picking up a coin triggers a collection sound.

You will implement the game in Unreal 5, and will need BP_Player, BP_Lane, BP_LaneSpawner, BP_Vehicle, BP_VehicleSpawner, and other blueprints as needed (e.g., BP_Coin, BP_Landscape (for trees, rocks, bushes…)

You can work as a team of up to two players.
SUBMISSION: Unreal Engine project (do not just submit uproject file) AND mp4 file showing game playing.

CPSC 386 Final Project, due Sunday, 20 May 2022 (at 2359)

Your name and team mate's name (if applicable) BOTH partners must submit this document)

Ana Rueda

Verify each of the following items and place a checkmark in the correct column.

done!	well, it's like this...	**Crossy Road** **(can pass some elements before final submission)**
☑		**Has 3d static meshes (created or imported) for trucks, cars, trucks, and logs**
☑		Has 3d static meshes (...) for chicken and eagle
☑		Has 3d static meshes (…) for trees, bushes, rocks, coins, and lilypads
☐		**Chicken jumps forward, backward, … when arrows or WSAD keys are pressed**
☐		Chicken looks in the direction it is jumping (WSAD and arrow keys).
☑		Camera follows chicken as it jumps forward but does not turn when chicken jumps
☑		Chicken cannot move if it runs into trees, rocks, or sides of sides of viewport
☑		**BP_LaneSpawner dynamically spawns of lanes of grass, highway, RR & rivers.**
☑		BP_VehicleSpawner dynamically spawns cars, trucks, trains, logs
☑		Grass lanes populate grass w/ trees/bushes/rocks (better random, can be static)
☑		RR crossing flashes lights alternatively and rings bells when train is coming
☑		**Running into cars or trucks cause chicken to be squashed (z scale < 0.1)**
☐		Falling in water causes water explosion and chicken sinks into water and squawks.
☐		Eagle swoops, grabs chicken if it doesn't move for a 3 seconds jumps back twice
☑		Finished chicken clucking, car horns, coin pickup, log stepping, eagle shrieking.
☑		HUD (head's up display) showing high and current score (jumps / coins collected)
		All code compiles
☑		Game plays without crashing
☐		Extra credit if eagle or chicken are animated

Comments on your submission

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