

Assignment #5 - CBL Game Development

3. 10. 2024 - Coming up with an idea

The game can be about a fish named Cosquer discovering the Cosquer Cave, located near Marseille. The Cosquer Cave was discovered in 1985 by professional diver Henri Cosquer. Inside the cave, you can find many prehistoric paintings depicting animals from that era. The cave is submerged in water, making it ideal for exploration by a fish. The goal of the game is for Cosquer to collect all the prehistoric paintings while overcoming various challenges, such as sharp rocks, strong currents, and underwater debris. A countdown could be added, referencing the real-world condition of the cave, where the paintings are slowly being washed away by the water.

Technical solution

- 2d game in Swing GUI
- controllable fish
- collectible paintings
- collision detection
- effect of "darkness"
- water currents

8.10.2024 - Forming a Backlog

Backlog

2 topics of choice

- version control: **git** - We will use git to distinguish between versions of our Java game.
- build systems: **gradle** - We will use gradle to build and manage our Java project.

The git will be also used to progress in between the goals. Every time a goal is met a new commit will be pushed to our Github repository.

Gradle helps us to build the final game and make it easily runnable on various computers.

Name:	Player movement
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How to demo:	When the arrow keys are pressed down a fish moves on the screen. The fish is the player. The player is able to move to 8 directions.
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Notes:	The movement of the player should have a "realistic" feel to it, however it is not yet known how will we achieve this.
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Name:	Collectibles (The goal of the game)
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How to demo:	The player is able to collect paintings in the game environment (underwater cave). When the player finds all the paintings and swims over them they should be presented with a "winning" screen.
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Notes:	The paintings should correlate to the original paintings in Cosquer cave.
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Name:	Collision Map
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How to demo:	When the main character hits the wall it should not be able to move past the wall.
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Notes:	Ideally, we want to implement an outline collision mask. So we have to check not only for the position of the player but for his whole body outline. This will become harder when the sprite of the player changes as the fish swims. (To simulate movement)
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Name:	Camera follows Player
How to demo:	The camera should follow the main character and the player should not be able to escape from the camera view.
Notes:	The camera should not display further than the map. Meaning that when the player is at the border of the map the map should not centre on player, rather position itself with a player on the side.
Name:	Health status
How to demo:	On the screen there are hearts displayed.
Notes:	When a player loses a heart then the heart bar should indicate this.
Name:	Instance interactions (Enemies, obstacles)
How to demo:	When the player hits enemies, a spider-crab, or hits obstacle, a sharp rock, then it will reduce the player's current hit points.
Notes:	The spider-crab movement might eventually bring up a new challenge.
Name:	Sprites over instances
How to demo:	Every instance has a 2D graphics, meaning that the instances are not just basic shapes but images.
Notes:	Very time consuming since we are better at programming than designing.
Name:	Effect of "darkness"
How to demo:	The player does not see the whole map, but just a small area around itself. It adds to the overall feeling from the cave.
Notes:	It would be amazing if we would manage to add some glowing fish or plankton, but I think this is not possible to do in the short time frame we have.
Name:	Water Currents
How to demo:	When the player swims into a water current, they are pushed in the direction of the current.
Notes:	Water currents will influence the player's movement temporarily.
Name:	Interactive music
How to demo:	Music will change dynamically based on player actions or locations in the cave.
Notes:	Music will enhance the immersive experience by adapting to gameplay situations.
Name:	GUI menu
How to demo:	A graphical user interface will allow the player to start the game, pause, and quit.
Notes:	The menu will be simple and user-friendly, allowing basic game control.