

Code Inspection

Generic Information

To maintain high quality code we performed code inspections. Code Inspections are a vital part of the QA process. We went through chosen code files together and thought how our code could be improved. Besides organised code inspections reported below we had Merge Request based system on Gitlab where other team members reviewed code before merging it into master.

At our organised code inspections we went through certain parts of our project. We always documented which files we inspected and which exact commit we reviewed. This was to ensure that we can later go back and see what we discussed at meeting. Information about exact content of inspections can be seen down below.

Categorisation and severity of issues

We decided to number categories of issues and then mark number next to every issue to make it easier to spot severe and hard to fix issues from easier and less important issues. In table 1 you can see the types of issues defined.

Table 1. Types of issues

Number of issue [n]	Name of issue	Description
1	Typo	Typo in comment or variable name. Doesn't affect gameplay but makes code harder to understand
2	Weak Warning	Small issue that doesn't affect main features of game. Missing comments.
3	Warning	Major effect on feature. Still compiles and rest of game works.
4	Error	Game is not in playable state or doesn't even compile.

From this point onwards, type of issue is marked with brackets like this [1].

Organized inspections

Date: 19.4.2018

Inspection coverage: PlayerAutoMove.cs, PlayerAutoSwim.cs

Commit SHA: d800c2a24bdf7814610b6e0ee62587c2ad4b6cc

Findings at the meeting:

PlayerAutoMove.cs:

- [2] On Start() the player's animation should be set, as currently the behavior is undefined
- [3] On Update() lines 31-32 the player's animation is set without any condition. This should be moved to somewhere else with a conditional check.

PlayerAutoSwim.cs

- [2] The code should include more comments, as every functionality is not clear as we read the code. For example line 37 requires commenting.
- [3] On lines 67-68 we thought that the player's oxygen should be increased over time when going up to gather air instead of instantly filling the meter. This may be implemented by using Mathf.Clamp()

Date: 28.4.2018

Inspection coverage: PlayerMovement.cs, PlayerAutoMove.cs, EditorBuildSettings.asset, ProjectSettings.asset

Commit SHA: ae19c975f272c0b872e4f169775e2bade7ef0d94,
10aa9eb5902d7e65193de27445d45f43ea882b11

Findings at the meeting:

PlayerMovement.cs:

- [1] We decided to change the level name on line 103 from "Finished" to "Finish"
- [3] The code doesn't seem to delete the coins when the player collects them on line 128-129, which it should do. We should add the removal functionality there.

PlayerAutoMove.cs:

- [2] On line 9 there is an unused variable. This should be deleted.
- [1] On line 34 we found that the comment line is a bit misleading and should be changed to something more descriptive.

EditorBuildSettings.asset

- [3] Project wouldn't recognize new name for the finish scene. Double check build settings for issues. Fix this by removing and adding it again in build settings.

ProjectSettings.asset

- [2] We noticed that our default resolution was not high enough for nowadays standards, and are changing it from 1024x768 to 1920x1080.
- [3] The game is currently freely scalable, which makes some functionalities unfair. We have noticed that the enemies might be harder to avoid, if the player shrinks the screen. To avoid this, we decided to only support one aspect ratio, 16:9 from this point onwards.