Sprint Retrospective, Iteration # 2 Group Ubiquitous Broccoli

| User story / requirement | Task | Task assigned to | Estimated effort per task (in hours) | Actual Effort per Task (in hours) | Done (yes/no) | Notes |
|---|--|---|---|--------------------------------------|------------------|---|
| As a user I want to be able to have the game configuration in an external file so that I do not have to change my configuration each time | Determine configuration attributes | Christian Slothouber , Earth Grob | 1 | 1 | Yes | |
| | Read configuration file with external library | Christian Slothouber , Earth Grob, Fabian Mastenbroek | 1 | 4 | Yes | There were a lot of problems with the library. A lot of exceptions were thrown. After the updated version it went quite smoothly. |
| | Allow configurable attributes in the game to be injected from outside the core classes with input sanitisation | Christian Slothouber, Earth Grob, Fabian Mastenbroek | 1 | 1 | Yes | |
| | Inject attributes from external configuration file into the core classes | Christian Slothouber, Fabian Mastenbroek | 1 | 1 | Yes | |
| | Read changed, configurable attributes and save configuration file with external library | Bas Musters, Earth Grob, Christian Slothouber | 2 | 0 | No | The library does not provide writing functionality, so we can't save new options. |

| As a developer I want to derive classes, responsibilities and collaborations to validate the architecture against the requirements | Derive classes, responsibilities, and collaborations (use CRC cards). Describe each step you make. Compare the result with actual implementation and discuss any difference (e.g., additional and missing classes). | Matthijs Rijm , Earth Grob, Bas Musters, Fabian Mastenbroek, Christian Slothouber | 4 | 4 | Yes | |
|--|---|---|---|---|-----|---|
| | Describe the main classes implemented in terms of responsibilities and collaborations | Bas Musters , Matthijs Rijm, Earth Grob | 2 | 2 | Yes | |
| | Reflect if some of those non-main classes have similar/little responsibility and could be changed, merged, or removed. If so, perform the code changes; if not, explain why you need them | Earth Grob , Bas Musters, Matthijs Rijm | 4 | 3 | Yes | We decided that our implementation was close enough to the outcome of our analysis, and didn't implement any changes to our codebase. |
| | Draw the sequence diagram to describe how the main elements of your game interact (consider asynchrony and constraints, if necessary) | | 4 | 5 | Yes | There was some delay, as we tried to let the IDE generate it first. Later, it was decided to do it by hand. |
| As a developer I want to have a code review moment to improve understanding of the code base so that the quality of the code base is under control | Have a code review moment on Friday | Fabian Mastenbroek, Christian Slothouber, Earth Grob, Matthijs Rijm, Bas Musters | 4 | 0 | No | We did have code reviews, but not on a specific moment. |
| As a developer I want to have the bugs fixed so that the user experience is improved | Receptor tiles should adapt based on connections | Earth Grob , Fabian Mastenbroek | 1 | 0 | No | Moved to third sprint, as there was not enough time this sprint. |

| | Fix level timer | Christian Slothouber , Matthijs Rijm | 3 | 1 | Yes | The fix was very easy, only 3 numbers needed to be decreased by one. We are probably going to redesign the Timer in the future. |
|--|--|---|---|---|-----|---|
| | Disallow acceptation of balls during receptor animation | Fabian Mastenbroek | 1 | 1 | Yes | |
| | Fix stuttering of balls when leaving/entering receptors | Bas Musters , Fabian Mastenbroek | 1 | 1 | No | Work has been put into this, but it isn't a very high priority issue so this is moved to third sprint. Not enough time this sprint. |
| As a developer I want to be able to find the sprint planning and retrospectives in the repository so that they can be easily found | Add sprint planning and retrospectives to the repository | Fabian Mastenbroek | 1 | 1 | Yes | |
| As a user I want to be able to see a working scoreboard. | Implement score keeping in game core | Christian Slothouber , Matthijs Rijm | 2 | 2 | Yes | Moved to third sprint. Not enough time this sprint. |
| | Display in-game score on screen | Matthijs Rijm, Christian Slothouber | 2 | 0 | No | Moved to third sprint. Not enough time this sprint |
| As a developer I want to fix formatting and documentation issues so that the code quality is maintained | Fix checkstyle issues | Bas Musters , Fabian Mastenbroek | 2 | 2 | Yes | |
| | Document undocumented classes | Earth Grob, Matthijs Rijm, Bas Musters, Christian Slothouber | 4 | 4 | Yes | |
| As a user I want to be able to pause and resume a game | Implement freezing of game core | Earth Grob, Bas Musters | 2 | 4 | No | Not enough time to implement it this sprint. |
| | Add basic user interface for pausing/resuming game (i.e. escape) | Bas Musters , Earth Grob | 2 | 1 | No | Moved to third sprint. Not enough time this sprint. |
| As a user I want to be able to hear sound effects and music | Implement sound effects on interaction | Fabian Mastenbroek , Christian Slothouber | 3 | 0 | No | Moved to third sprint. Not enough time this sprint. |

| in the game so the user experience is improved | Play music theme during game play | Christian Slothouber , Fabian Mastenbroek | 1 | 1 | Yes | |
|--|-----------------------------------|---|---|---|-----|--|
| As a user I want to be able to see balls animating to make the game more realistic | | Fabian Mastenbroek , Christian Slothouber, Matthijs Rijm | 3 | 0 | No | Low priority so moved forward. Not enough time this sprint |

Main Problems Encountered

Problem 1

Description: After a pull request had been submitted, it took too long before a pull request was reviewed by the its reviewers (sometimes taking more than a day). This caused delay, since new features couldn't be merged into the master.

Reaction: We made better use of reminders, both from Github and in person.

Problem 2

Description: The current sprint planning was too optimistic, which resulted in some tasks not being finished this sprint.

Reaction: We postponed some less important features and focused our time and effort on the more important tasks. This way we did not have lots of barely started features and but a group of finished features and a group of delayed features.

Adjustments for the next Sprint

- Since the code reviews and merging of the new features is a bottleneck in our workflow it would beneficial to make this process more efficient. In the next sprint we are going to be more strict with the code reviews. Each team member will check at least once a day if there are any pull requests for which they are assigned to review. If the designated team member is assigned and the changes have not been reviewed yet then he will do so the same day. Important is to note that pull requests with label "status: review needed" have a higher priority than the ones with any other status label. This way all the team members can proceed without delay the next day.
- Making a more realistic sprint planning, so that we are actually able to do all the things we planned on doing. The estimated effort per team member per week will not exceed the limit of 10 hours, as this is a reasonable amount of time that can be spent on the project. If assigned tasks will take far more time than estimated then the designated team member will ask for assistance from the rest of the group.