**Sprint 3**

Scrum Master: Mirjana

Product Owner: Tamas

**Planning**

Create new and update old User stories, implement the Log in system and the security, finish up the game logic and end game conditions, authenticiation service, refactor our client using the authenication service, handle the concurrency and transactions properly.

**Day 1**

Today we are implementing the web client for the core functionalities of the game, game security, finishing up the main features (randomised questions, game ending, game outcome). Created the WebClient successfully and implemented the LogIn function. All the programming pairs did very well today and we have managed to knock off the highest number of story points so far. This was a very productive day.

**Day 2**

We are still working on core game functionalities such as Create and Join game in the WebClient which have the biggest number of story points, further implementation requires some research on JavaScript which will be conducted over the weekend The implementation of security has gotten really complicated and the programming pair has hit a wall but managed to find a solution and they should be on track for next time. Other programmer started with the implementation of the End game screen in our dedicated client and encountered some problems which he wasn't able to solve today, so hopefully he will find a solution soon.

**Day 3**

Today we will try to refactor all of our code, finish implementing the security, registry form and player credentials in the dedicated client. We tried to implement the QuizTime and managed to show only the questions and answers but failed to do the validation of chosen answers, so hopefully we will manage to do it tomorrow. We knocked off 19 story points today and we are slightly ahead of schedule. The problem with merging appeared again but we have managed to fix it, then we ran into another problem, the code is not working properly like before. A lot of refactoring will be necessary, our biggest issue at the moment is Entity Framework. Tomorrow is the last sprint day and we will push to solve all the bugs so we have more time to write the reports.

**Day 4**

We are trying to work on our refactoring and today we will implement transactions. Some of the group members will start writing the report and we have decided on doing more Unit testing for the game to do the Quality Assurance. We have managed to implement for the Web client to show the correct and incorrect answers.

SPRINT RETROSPECTIVE

What went well:

* we regularly showed up on time each day
* the programming pairs worked better than usual
* we all worked equally on separate things
* we communicated well
* we had some extra time so we have implemented some extra features like concurrency

What did not go well:

* underestimating research spikes
* wrongly estimated some User stories
* quality suffered

What can be improved?

* quality assurance
* researching and report writing

We did 52 story points in Sprint 3.