

# Sprint Retrospective, Iteration #5

Context Project: Computer Games

Group: Team Kroket

User Story	Task	Member responsible for the task	Task Assigned to	Estimated Effort Per Task (in hours)	Actual Effort Per Task (in hours)	Done (yes/no)	Priority (A - E) (A is highest)	Notes
As an Oculus Rift Player, I want to walk around a room that is aesthetically pleasing and features more objects than just walls and flat paintings, so that it's more fun to play the game.	Recreate the entire scene in Blender.	Jochem	Irene, Jochem	10	16	No	B - We need more objects to interact with, and we want to fill the scene some more. This is essential for an ultimately expendable game.	See problem 1. Since we were not able to add objects, we also did not ensure that it works with the implemented collision and interaction.
	Ensure the newly created scene works with previously implemented collision and interaction.	Harvey	Jochem, Harvey	10	0	No		
As Rafael Bidarra, I want to know what the state of each teams progress is, so that I know where they might need help and know how their progress is going.	Prepare the Midterm Plenary Presentation.	Irene	Irene, Alan, Harvey, Jochem, Mayke	20	20	Yes	A - This needs to be done before 2016-05-24 15:45	-
As a programmer, I need to	Update the	Alan	Alan,	5	6	Yes	C - This is	-

know what the main architecture of our system looks like so I can understand the system better.	Architecture Design Document		Jochem				mandatory and gives an overview of our system. Not essential for the game itself	
As a programmer, I want analysis tools to check my code so I can measure code quality and test coverage.	Add coverage, pmd, checkstyle and findbugs to the android repository.	Harvey	Harvey	9	17	No, <a href="https://github.com/alivanrossum/kroketapp/pull/12">https://github.com/alivanrossum/kroketapp/pull/12</a>	A - Since not all the tools are configured correctly we are losing points on the code quality, which is unnecessary.	Pmd, checkstyle and findbugs were implemented correctly however coverage wasn't see problems.
As a mobile player, I want a fully functional minigame so I can enjoy the game as a whole.	Finalize Minigame A.	Mayke	Mayke, Irene	2	1	Yes, <a href="https://github.com/alivanrossum/kroketapp/pull/13">https://github.com/alivanrossum/kroketapp/pull/13</a>	A - There are still some minor changes that need to be done, which has a high priority since we want to have a minigame that is fully finished.	-

As any player, I must be able to lose the game, so there is more reason to try to win the game.	Add a timer to the overlay of EscapeVR, that starts counting down from 15:00 when the game starts.	Jochem	Jochem, Alan	5	0	No	B	We did not have enough time to implement this yet. However, we did work on and improve the head up display, so this will be easy to add in the next sprint.
As a mobile player, I want to play more than 2 minigames, so I can entertain myself longer.	Create a minigame C	Irene	Irene	10	7	Yes, <a href="https://github.com/al-anvanrossum/krocketapp/pull/9">https://github.com/al-anvanrossum/krocketapp/pull/9</a>	B	The minigame still has to be incorporated into the host and EscapeVR.
As a mobile player, I want to be able to see if there is no server available, so that I know why the game does not proceed.	Change the app so that when there is no server available, the screen shows a message instead of crashing. (This task caused problems last sprint)	Alan	Irene, Alan	5	6	No	C - It is not essential for the game to work, but it is every bad if the game is crashable.	We still did not manage to find exactly where this exception exactly comes from, even though we tried many things to handle this exception. Next sprint other people should

								look at this, because we cannot manage to find the error.
As a mobile player, I want to be able to synchronize information with the VR player, so that we can solve puzzles together.	Find a way to send data from a service to an activity class in the app. (This task caused problems last sprint)	Irene	Irene	5	5	Yes, <a href="https://github.com/al-anvanrossum/krocket-app/pull/9">https://github.com/al-anvanrossum/krocket-app/pull/9</a>	D - It would be nice if we could incorporate some randomness into the game, but if this will cause a lot of problems and cost a lot of time, then we will just hardcode the information.	-
As a user, I want to play a game without encountering any bugs, so I can enjoy the game to the fullest	Write tests for the core of the pc game.	Mayke	Mayke	15	17	No	B - It is mandatory to write tests, and we have not done much in this regard. So	Testing the escapeVR is very difficult, see problem 2.
	Write tests for the android app	Harvey	Harvey	10	10	Yes, <a href="https://github.com/al-anvanrossum/krocket-app/pull/11">https://github.com/al-anvanrossum/krocket-app/pull/11</a>	it is pretty important that this task is completed	See problem 3.

	Write test for the host	Mayke	Mayke	5	3	Yes, <a href="https://github.com/alvananrossum/kroket-host/pull/1">https://github.com/alvananrossum/kroket-host/pull/1</a>		-
As a player, I don't want to have to fiddle around with different IP addresses, so I can fully focus on just playing the game.	Set up a dedicated server to host the game.	Jochem	Jochem	1	1	Yes	B - This is trivial yet quite useful for testing.	
As a developer, I want to be able to make changes to the EscapeServer easily, so I won't have to switch branches in the main repository.	Put the EscapeServer on a separate repository.	Alan	Alan	1	0.5	Yes, <a href="https://github.com/alvananrossum/kroket-host">https://github.com/alvananrossum/kroket-host</a>	B	
As a developer, I want to easily understand how the EscapeServer works, so I can expand it easily.	Refactor the EscapeServer.	Jochem	Jochem, Alan	5	6	Semi, <a href="https://github.com/alvananrossum/kroket/pull/16">https://github.com/alvananrossum/kroket/pull/16</a>	B - We want the code to look clean this sprint, so that it is easier to extend the code in further sprints.	We did mostly change the EscapeServer according to the feedback document we received. We do, however, want to refactor the EscapeServer further to make

								the code neater and clearer.
As a mobile player, I want to stay in the minigame when I have started one, so I can finish and enjoy the minigame.	The app should be adjusted so that we can always get the current activity. This will enable us to only start a minigame if the mobile player is in the waiting screen.	Irene	Irene	5	3	Yes, <a href="https://github.com/alivanrossum/krocket/app/pull/8">https://github.com/alivanrossum/krocket/app/pull/8</a>	C	
As a player, I want there to be multiple minigames, so the game has more variety and is more fun to play	Think of 1 or more new minigames for the android application. (If there is time, also implement)	Alan	Alan	10	15	Yes, <a href="https://github.com/alivanrossum/krocket/app/pull/13">https://github.com/alivanrossum/krocket/app/pull/13</a>	D - More minigames are always nice, but not a strict requirement for now.	Minigame D_Gyroscope has been added, a coin collection phone-tilting game.
As an Oculus Rift Player, I want to have a nice HUD to look at with nice overlays or a menu.	Create new screens and expand the HUD.	Jochem	Jochem	4	3	Yes, <a href="https://github.com/alivanrossum/krocket/pull/15">https://github.com/alivanrossum/krocket/pull/15</a>	E - This is not necessary for this sprint, but would be nice for the visuals.	
As a developer, I want to easily understand how the EscapeApp works, so I can expand it easily.	Refactor the app according to the feedback.	Irene	Irene	2	3	Yes, <a href="https://github.com/alivanrossum/krocket/app/pull/1">https://github.com/alivanrossum/krocket/app/pull/1</a>	A - Since we are receiving bad grades for our code, we really need to look at this and	

						<a href="#">0</a>	refactor the code in order to also improve our grades.	
As a developer, I want to easily understand how the EscapeVR works, so I can expand it easily.	Refactor escapeVR	Mayke	Mayke, Jochem	15	15	<a href="https://github.com/alvananrossum/krocket/pull/19">https://github.com/alvananrossum/krocket/pull/19</a>		

## Main problems encountered

### Problem 1

#### Description:

Irene wanted to start with furnishing the EscapeScene by adding objects to the environment. We wanted to use already existing object files and download those to put in the scene, because making objects ourselves would cost way too much time. However, when Irene wanted to import models in Eclipse or JMonkeyEngine, the textures did not show, so the objects remained black.

#### Reaction:

Irene asked for help, and Jochem said that after trying for a while he did see the textures on his laptop. However, when he showed Irene how he did it, Irene found out that she did the exact same thing, but for her it did not work. We spent the whole thursday finding an explanation for this, but the issue still remains very strange to us. When Jochem sends his j3o files generated by JME to Irene, they do not work on Irene's laptop. Even more peculiar, when Irene sends the files generated by her pc (which do not work on her machine) to Jochem, they do work on Jochem's machine. We tried different approaches, and even reinstalled JME, but with no success. We poked some other group members to see if they can see the textures, but they could not either. We still have to see what the Oculus Rift makes of these objects. For now the issue is still not resolved, even though it has taken a very large amount of time already. It would be very annoying if only Jochem could work on the furnishing of the scenes.

### Problem 2

#### Description:

Testing the EscapeVR is very difficult. The audio, scenes etc. all attach things to rootnode and need an assetmanager. These are objects that are generate when starting something that extends VRApplication. However, this works with threads, so if a EscapeVR object is instatiated, it can be that the rootnode etc. are not. Also threads make testing impossible.

#### Reaction:

Mayke tried to refactor so it would be easier, but this did not go well. We will need to test in a different way than JUnit.



## Problem 3

### Description:

Generating a coverage report for the android app is extremely difficult. The way coverage reports seem to be generated is that first gradle runs a `connectedCheck`, `createDebugCoverageReport` or `createDebugAndroidTestCoverageReport`. These three commands are different however they all run through the instrumentation tests and output their results in a `coverage.ec` file. You can then use Jacoco to use the `coverage.ec` file and generate a proper html or xml report. However while all are tests are being run successfully `coverage.ec` is always an empty file therefore the report generated by Jacoco will say coverage is 0% for everything which isn't true.

### Reaction:

Harvey attempted multiple solutions including multiple attempts at custom instrumentation test runners and different jacoco tasks in the gradle build. However none of them fixed the issue of the `coverage.ec` file being anything but zero. The problem is too big for one member of the team so the solution is to have a group of people look at the issue.

## Problem 4

### Description:

In Minigame D, the Gyroscope, we need to know the width and height of the playfield. These can normally be obtained using `DisplayMetrics.getMetrics.heightPixels` and `.widthPixels`. However, these give the total screen size, which is bigger than the playing field for some reason. With height this is understandable, as there is a small header on top. However, with width this is weird, as the screenwidth should match it exactly. After some fiddling around it was actually 30 dp less in the emulator we were using.

### Reaction:

There has to be a better way to 'cleanly' fix this. As of now, the 'actual' width and height are hardcoded by subtracting 150 respectively 30 from the height and width. Finding a solution to this problem has been added to the backlog of the next sprint.

## Adjustments for the next sprint

We will need to divide the hours better in the backlog. Also, if during the sprint we realise certain tasks have been underestimated or overestimated, we should reflect on this and adjust the task assignment accordingly.

Working in our group and the communication was much better this week than previous weeks. We know that this is therefore not an adjustment, but we want to highlight that we would like to continue this upward trend.