Sprint Retrospective, Iteration #7

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 a mobile player, I want to have something to do while the Oculus player is looking for clues in the room, so I do not get bored while playing the game.	Add a game to the Waintingactivity. This game will be our current minigame D: the gyroscope. When the mobile players have collected a certain amount of coins, all the players will receive more time to escape.	Irene	Alan, Irene	14	10	Yes https://github.com/alanvanrossum/kroketapp/pull/24	A - It is very important that all players will have fun during the game, and are not just waiting for other players to finish something. Therefore it is very important that mobile players have something to do while waiting for the game to progress.	Apart from the changes described in the task, we also slightly changed the minigame itself. Now there is also a 'coin' which makes you lose all your collected coins so far.
As any player, I must be able to lose the game, so there is more reason to try to	Let a timer run in the host, which lets the clients know when they are out of time.	Jochem	Jochem	3	3	Yes https://github.com/alanvanrossum/krokethost	B - This has a high priority, because we want the players to feel the time	See problem 4.

win the game.						/pull/16	pressure. This can be done by adding a timer.	
	Add a timer to the overlay of EscapeVR, that starts counting down from 10:00 when the game starts. Also add a screen for when the timer has run out.	Jochem	Jochem, Irene	3	5	Yes https://github.com/alanvanrossum/kroket/pull/42		
	Handle the timer in the mobile application. A new screen should appear when the timer has run out.	Irene	Irene	2	2	Yes https://github.com/alanvanrossum/kroketapp/pull/31		
As any player, I want to be able to complete minigame B, so I can progress through the rest of the story.	Finalize minigame B on the host. This means adding that if one of the players fails the minigame, the game is automatically restarted. And that minigame B can only be completed if ALL players succeed their parts.	Alan	Alan, Harvey	2	6	Yes https://github.com/alanvanrossum/krokethost/pull/12 https://github.com/alanvanrossum/krokethost/pull/13	A - Since the feature freeze is next week we want to have this feature fully implemented before then. Also it is important that the VR player also has to do something when the mobile players are solving the minigame.	Minigame B took quite some more time to complete than we thought. We had to do a lot of testing and fixing bugs for this minigame which took a lot of time.
	Finalize minigame B for the VR player.	Harvey	Harvey	5	10	Yes https://github.c		

						om/alanvanrossum/kroket/pull/35 https://github.com/alanvanrossum/kroket/pull/37		
	Finalize minigame B for the mobile app player.	Mayke	Mayke, Harvey	2	6	Yes https://github.com/alanvanrossum/kroketapp/pull/29		
As any player (Oculus and mobile), I want to be able to play minigame E, so that the game is more fun since it has more aspects and minigames.	Think of a storyline to incorporate minigame E into the gameplay for the Oculus.	Alan	Alan	6	4	Yes	C - Since the feature freeze is next week we want to have this feature fully implemented before then. However, new minigames are not the highest priority right now, since we already have several minigames and the already existing ones are not yet all implemented fully on the EscapeVR side. Implementing both of these minigames in EscapeVR is	We decided to add minigame E to the waiting screen, since we did not have enough time to (fully) implement this minigame on the VR side. Now you can choose yourself which of the two minigames you want to play in the waiting screen. The minigame uses the same functionalities in the host as the other waiting
	Implement minigame E_squasher. Also on the EscapeVR side.	Jochem	Jochem, Harvey	14	0	No		
	Create objects which matches the game, and put this in the scene. This will trigger minigame E.	Jochem	Jochem	6	0	No		
	Implement minigame E_squasher. Also on the EscapeHost.	Mayke	Mayke, Alan	4	0	Yes		

	Implement minigame E_squasher as a waiting minigame.	Harvey	Jochem, Harvey	4	6	Yes https://github.com/alanvanrossum/kroketapp/pull/33	probably a too ambitious task to finish this sprint, but we will try to get as far as possible. Also, before we can start implementing we have to finish the first task: think of a storyline for the minigame.	minigame, so no work was needed there.
As any player (Oculus and mobile), I want to be able to play minigame F, so that the game is more fun since it has more aspects and minigames.	Think of a storyline to incorporate minigame F into the gameplay for the Oculus.	Alan	Alan	6	5	Yes		Minigame F is now refactored to minigame D, since this minigame comes after minigame C, so this is the logical order. This minigame is the final minigame in the sequence. If this minigame is finished, the game is won.
	Implement minigame F_Lock allso on the EscapeVR side.	Irene	Irene, Mayke	14	16	Yes https://github.com/alanvanrossum/kroket/pull/39		
	Create objects which matches the game, and put this in the scene. This will trigger minigame F.	Jochem	Jochem, Mayke	6	3	Yes https://github.com/alanvanrossum/kroket/pull/39		
	Implement minigame F_Lock also on the EscapeHost.	Alan	Mayke, Alan	4	4	Yes https://github.com/alanvanrossum/krokethost/pull/15		
	Finalize minigame F for the mobile application.	Alan	Alan	3	6	Yes https://github.com/alanvanros		

						sum/kroketapp/pull/30		
As a programmer, I need to know what the main architecture of our system looks like so I can understand the system better.	Update the Architecture Design Document	Alan	Alan, Harvey	6	6	Yes	C - This is mandatory and gives an overview of our system. Not essential for the game itself.	
As a player, I want the game to start with an explanation about the storyline, so that I know in what setting and story the game plays.	Create an intro video for the Oculus and mobile player, which explains the storyline.	Alan	Jochem, Alan	6	0	No	A - This is an essential feature for the playability of the game.	Because the other tasks were a lot of work, we did not get to start on this. This is definitely something we want to finish next sprint, since this explains the storyline.
As a player, I want to see a new scene or overlay when I win the game, so that I know that I have won the game and feel rewarded.	Create a scene for when the player has escaped the room. (Can also be an overlay for now)	Irene	Jochem, Irene	7	8	Semi https://github.com/alanvanrossum/kroket/pull/42	D - We want the players to see a new scene when the game is won. However, the actual implementation of the minigames is more important.	First we really wanted a scene for the VR player when the game was won. However, after trying several scenes, we were not satisfied with the results. We decided that for now we just use an overlay.

As an Android player, I want to get the correct feedback from the connection on my screen, so that I know if I am connected to the game.	Fix the UI for setting up a connection for the Android app (this caused problems last week, since it first shows not connected when the player ís connected).	Jochem	Jochem	3	8	Yes https://github.com/alanvanrossum/kroketapp/pull/20	A - This has a high priority, since this problem is encountered every time the app is started. We want to fix this, so that the app players get correct feedback from the app.	
As an Android player, I do not want to be able to exit the current minigame by pressing the back button, so that I can keep playing the game even though I accidentally press the back button.	Find a way to disable the back button for the app players.	Harvey	Harvey	5	1	Yes https://github.com/alanvanrossum/kroketapp/pull/33	B - We do not want the app player on a real mobile phone (so not an emulator) to exit the minigames (if they are not finished yet)	Turned out to be quite easy, by overriding the onBackPressed method in android.
As a developer, I want the code to be easy read and modify, so I can easily add or modify things	Refactor the KroketApp (according to the feedback received).	Harvey	Harvey, Alan	6	6	Yes https://github.com/alanvanrossum/kroketapp/pull/35	A - This has a high priority, since this feedback can improve our grade for the code.	The refactors caused quite some merge conflicts at times, but we managed to resolve this.
	Refactor the KroketHost (according to the feedback received).	Irene	Irene, Jochem	5	10	Yes https://github.com/alanvanrossum/krokethost/pull/10		

	Refactor the EscapeVR (according to the feedback received).	Irene	Irene, Jochem	10	10	Yes https://github.com/alanvanrossum/kroket/pull/33		
As an user, I want to play a game without encountering any bugs, so I can enjoy the game to the fullest	Add/update tests for EscapeVR, update test documents for untestable things	Mayke	Mayke	4	4	Semi	C - We have written most testing that was possible up to now (including test document). In the next sprint we need to update the tests according to the new added code.	See problem 1.
	Add/update tests for the android app.	Harvey	Harvey	4	4	Yes https://github.com/alanvanrossum/kroketapp		
	Add/update tests for the host.	Mayke	Mayke	4	15	Yes https://github.com/alanvanrossum/krokethost/pull/18		
As an user, I want to be in a nicely and realistically decorated room, so I feel immersed in the game.	Add decoration and objects to the escaperoom.	Irene	Alan, Irene	3	2	Yes https://github.com/alanvanrossum/kroket/pull/36	D - We want the room to look good so that the VR player can a nice experience. However, the functionality of the game is more important than the looks.	
	Add shadows to the objects in the room and adjust the lighting.	Harvey	Harvey	3	3	Yes https://github.com/alanvanrossum/kroket/pull/41		See problem 2.

Main problems encountered

Problem 1

Description:
Much code was refactored and changed a lot this week, which has as a result that many tests failed and were useless. These tests had to be rewritten.
Reaction:
The tests have been rewritten for the host mainly, but it does feel like a waste of time.

Problem 2

Description:
Getting shadow's to work properly on the objects in the scene. We originally created a shadow filter for the objects in the scene. The problem with this method is that when launching escape VR not a single object would load in the scene which resulted the player being dropped in a green void. The second problem is that once we got shadows to work properly you could see the shadow cast by an object through the object itself which is of course not what we want.
Reaction:
We solved the shadow filter problem by using a shadow renderer instead of a shadow filter. The shadow renderer worked as intended so we decided to use that method instead. We solved the second object by creating the shadow renderer before adding the objects which solved the issue of seeing shadows through the objects themselves.

Problem 3

Description:
Sending messages from the host to minigame F (is now minigame D) to include a random sequence failed to be implemented.
Reaction:
We've spent way too much time to get this to work. The plan was to let the host send a random sequence of 3 numbers to all players. This should be possible, because we did a similar thing with the colorsequence in minigame B. After hours of fiddling around and trying to bugfix, we decided to predefine the correct code. This way it did not have to be sent through a message from the host, but is rather already known by the

host and the android app at the start of the game. If we would have had more time and wouldn’t mind spending countless hours bugfixing, we could get this to work randomly, but for now that doesn’t seem worth it.

Problem 4

Description:
The host initializes a timer and tells the VR-client (EscapeVR) to do the same. When the timer on the host runs out, the VR-client is told to end the game. The timer in the VR-client appears to get out of sync with the timer on the host. This could result in a somewhat unexpected behavior. This is mostly caused by the initialisation of the VR client requiring a few seconds to complete. Also, timers in computers aren't reliable for precision.
Reaction:
We will synchronize the timer more often and change how the VR-client computes the time value at which it should end the game. This has to be done next sprint.

Adjustments for the next sprint

This sprint we spent quite some time on upgrading the quality of the code by refactoring our code. Next sprint we want to continue doing this, especially since the feature freeze starts after today. At the end of next sprint we also have the final upload of our code to SIG. Therefore it is very important that we take the code quality into account even more next sprint.