# Retrospective

## Group G

Our journey through IOS snake project brought us many detail changes and change of design but through this all, we made our snake game as intended even with greater features than first anticipated at the very start of the project

## The beginning …

We first started off with assigning everyone’s responsibilities. First everyone made themselves familiar with how the game should work and the basics of snake. After the first initializing step everyone started with their own part whereas we saw fit. Håkan started to dive into JSON and data management, AndreasP started with creating animations for the project, Erik and AndreasM started with the fundamental ground for the basic logic of the game where they split individual task between themselves.

## Into the journey …

The project was coming along and went smoothly without any of us realizing yet how far we had to go to reach the finish line. The basic game was up and running where we could perform basic testing, such as see how the game performed if there were any major errors that wasn’t supposed to be there etc. The project had entered a changing phase were we didn’t yet know how we wanted the design to look like. At the current time AndreasP worked on designing the layout for the main menu and the game over view which received split opinions and hence led later on to redevising the original game interface idea. Håkan had implemented a working score system and Erik and AndreasM had successfully got the game working.

## On a Cross Road …

Device testing had led to many choices and decisions were needed to appeal in order to progress our project. The initial animations where installed but where causing a heavy load onto the simulator even though with some adjustments to memory allocating prevented it, the simulator processors where still running the game slowly. During this phase the animations were heavily affecting the memory management but on later realizations the team found out that also the main game was heavy on the memory but since everyone agreed to that it is most important to have a good working game without any loading errors in comparison to having a flashy looking applications that is lagging and causing a bad user experience. The group decision was mutual and chose to make cut into the animation scene by removing parts of it and instead the changes were made to integrate it into the “shake motion” hardware function built in by the phone. Now the animation only appeared while using “shake motion” instead of the original idea and it played out better than it was before. Yet another problem we faced was by the end of every game session, what should happen and where should the user be redirected and which options should be available for the player. To implement that idea we also thought immediately about how to attempt countermeasures for abuse of the features to keep them safe and secure.

## Nearing the final destination …

Our choices made our application be better in conserving and memory usage and it runs smoother after the fix. Erik and AndreasM had found and made changes to the game’s core memory management, Håkan had perfected the score management with both local data stored and JSON data being able to fetch from a source and upload game scores to it. AndreasP had applied fixes to the animation changes and integrated it into the “shake motion”. But then after those changes were made a new problem appeared before us and we tried to find a way how to solve this issue. When using the name option to add a name chosen by the player it covered the input field and had an ugly effect on how the user experience was perceived. The first countermeasure was done by adding a closing button to the keyboard input, that was done by AndreasP but after a group discussion we came all to an agreement and decided to make the change. The idea was originally pitched by AndreasM and he suggested that we rearrange the layout but ultimately got pitched by Erik into action and the “Game Over” view changed again it’s design to the better. On the “Game Over” view there were also a few complications regarding the segues leading to our different views. They were incorrect and leading to wrong points. The assigning buttons have had a mix-up at the start and were in need of a fix. Håkan jumped at the task.

## The finish line is close …

Our original design has been changed and reworked more times than we can count now and if we all were to be admitted to take the stand and stand trial we would all plead that the greatest challenge were making up our minds about the design, although ultimately it shouldn’t concern us all too much in this project work. From the first phase to near end the most visual changes happened to “Main Menu” view, the Game scene and “Game Over” view. Main menu had at the beginning animated snakes moving constantly across the phone’s screen in any direction. Now it’s been changed to have a trigger with “shake motion” to start the animation. Game scene had originally black background with blue play buttons and over the course of the projected changed its background colour from black to white, and from white to light blue. Its play buttons changed from blue to orange. Game over had at the start a very similar layout to our original mock-up image and also a bonus feature with snakes animated across the screen. Its current appearance changed up to a cleaner without the issue we discovered with the name field. The animations were removed to reduce memory use but its overall appearance give a more satisfying user experience since the user can now access all features without being in a position where some options become hidden cause of other features.

## At the End

The final preparations we had to complete was the “DataHandler” class that dealt with all of our JSON data management, the current version was functional but was lacking in the MVC aspect. Håkan made dramatic changes to alter into a MVC styled fit. Erik, AndreasM and AndreasP made their own parts of the code more readable and easier to understand at first glance by adding comments where they were needed, appropriate variable changes and relocating order of functions to a readable manner. As a group we took a final design decision about the last segue that still wasn’t finished, the segue between “Game Over” view and “Main Menu” view. Everyone where in favour of enrolling with the plan and implement the final touch.

## The Finish Project

Over the course of our project’s direction we have now arrived at our finish line. Overall accomplishment was a success and in conclusion all items on the to-do list were achieved plus more items that was added along the way, etc. animations and upload JSON data. The application is able to start up, have a steady upkeep, play multiple game sessions, and load a high score list which is stored online and a locally stored highest score on the device. Optional for the user to submit their name or free of choice username. There is also the option to view the high score list on both “Main Menu” and on the “Game Over” view. The high score list is fetched from the same source independently whether on which view the user selects it from.