# Retrospective Document
## Sprint-<4>

## Work & Test Progress

*List the milestones planned for this sprint along with their completion percentages.*
*(Please do not list the details of workpackages/tasks.)*
*List the tests finalized as part of the milestones planned for this sprint.*

-A wide research on recipe recommendation systems has been done with the help and guidance of our supervisor  Ayşenur Birtürk. We have studied on different food and recipe categorizations with their usage in different algorithms. We managed to finalize our decision about the categorization and design of our databases in order to have a concrete and stable recommendation system. (100%).

-Since we had inconsistencies with some of our sensors from the 1st semester, we have decided to renew them. We have spent some time on research and decision of those sensors and we have succeeded to order "Sparkfun Flexiforce Pressure Sensor". Since our order has not arrived yet, our target of finalizing hardware components' connection is going to be reached a little later than expected. However, the implementation of Arduino codes is completed. When the new sensors arrive, we will connect them to our hardware component and our database (75%).

-In the beginning of the sprint, we were planning to find a usable recipe and food database from web to have it as our recipe database. We have spent time on finding a suitable database and its API. However, the databases online were from different sources which caused inconsistencies in our database or required to write a Python HTML parser which was going to take too much effort for small results, we changed our target of using a ready database and we have started to create our own database by hand (80%).

-This sprint, another focus was to move our local server to department servers, move our databases there and connect it to our Android application. We faced several problems with reaching department servers and afterwards creating the connection through PHP programming. Currently, we managed to move our server to department servers and started the communication of the databases with the server. However, we are still in process of finalizing the connection between the server and the server. (80%)

## Team Progress

*List the team members along with their contribution percentages.*

Aslıhan Bener (25%)
Çağla Burcu Aloğlu (40%)
Gökhan Eskizara (10%)
Yağmur Boztürk (25%)

## Left-overs (Backlog)

*List the milestone(s) that could not be 100% completed in this sprint. Give your reasons for the incomplete milestone(s).*

-We have not been able to finalize hardware implementations and integrations since our sensor order did not arrive yet from abroad.

-Food and recipe database for our recommendation system is not completely usable since we have decided to create our own database by hand. For now we have more than 30 recipes in our database but soon it will be a lot more so it will be enough to use for recommendation systems.

-Android-server connection is not finalized due to our lack of knowledge in PHP and Android programming.

## Next Sprint

*List the milestone(s) that will be targeted in the next sprint.*

-The hardware component of the system will be finalized, that is the new sensors will be connected, outputs will be tested and the output will be sent to Database through WiFi Shield.

-All components of the system will be able to communicate with each other (Server-Databases-Android Application-Hardware Component).

-Filtering algorithms will be implemented which will result in recipe recommendations returning based on the refrigerator ingredients, user preferences such as Vegetarianism, difficulty of the preparation of the meal, duration and cooking types such as Fried, Boiled etc.

## Comments

*Your comments (if any) regarding to this completed sprint.*

This sprint our work was mostly about research and overcoming difficulties related to the server and databases. Since the next steps of our project is mostly recommendation, it was crucial to have a solid communication between our components and solid database that would support the algorithms ahead. Even though, our deliverables are not really specific, we managed to come through our 2 main issues mentioned before and we expect the next sprints to be more outcome related and fast progressing.

Also, since he had his master's applications and personal issues, our team member Gökhan Eskizara was not able to contribute 100% to our general workload during this sprint, but he has finalized his all work and now ready to contribute and compensate.

## Assistant's Evaluation

*Assistant's (Team Leader's) comments regarding to this completed sprint.*

## Supervisors's Evaluation

*Supervisor's (Team Leader's) comments regarding to this completed sprint.*