

Group 6 Milestone 1 Report

1.Executing Summary

To come to Milestone 1, Team Cultidate has been pushing forward with intensive work. As of Milestone 1, the project has its core structure with strong backend and some foundations on frontend and Android app.

To make a self-review to this milestone, most of the backend functionalities are implemented well, became functional and ready for integration to frontend and Android. However, frontend side of the project fall a little behind of this due to subteam members' lack of motivation. All details are documented on the following pages of this report.

For the upcoming milestone 2 and as next steps, some necessary steps are considered and being taken: Team Cultidate has reorganized its division of work, will be deeply focusing on issues/tasks assigned to team members and these assignments will be created and checked by the subteam members as well as newly chosen team communicator. Fundamental backend system structure is almost done and from now on, some extensions to backend will be made such as email activation of users, Facebook login, forgot password feature, user&event static media management, recommendation system, location management, complete compatibility for W3 Web Annotations Standard as requested in the project description. Frontend and Android part of the project will be taking action according to Project Plan and all necessary developments will be done by corresponding teams.

2.List and Status of Deliverables

2.1. Android

Deliverables	Status
Login Page Design	Done
Sign-up Page Design	Done
Profile Page Design	Done
Services for API Endpoints	Done

2.2. Backend

Deliverables	Status
Production Environment Setup (Heroku)	Done
Authentication API Endpoint	Done
User information API Endpoint	Done
Event List / Create / Update API Endpoint	Done
Attendance Status API Endpoint	Done
Comment API Endpoint	Done
Follow API Endpoint	Done
Media API Endpoint	Done
Tag API Endpoint	Done

Vote API Endpoint	Done
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2.3. Frontend

Deliverables	Status
Login Page Design	Done
Sign-up Page Design	Done
Recommended Event Page Design	Done
Services for API Endpoints	Done

3.Evaluation of the status of deliverables and its impact on plan

3.1. Android

As tabulating in section 2.1; Login, Sign Up, Profile Page were done according to Requirements. However, the requirement 1.1.1.1.1.2, 1.1.1.1.2.2, 1.1.1.2.3, 1.1.1.3.2 could not be finished, those are in progress. Parts were done are successfully working. So, API is working properly.

Since there are some points not finished yet, we will surely shift them to aims of Milestone #2. That is to say, project plan shifts below. Yet, this will not be a big problem because there are not just a lot of missing points.

3.2. Backend

As tabulating in section 2.2; User Related and Event Related Models' endpoints were done according to requirements. Parts were done successfully working.

Since there are a lot of parts done before Milestone #2; that is to say; aims of Milestone #1 are done and most of the Milestone #2 aims are done, we will surely shift project plan above.

3.3. Frontend

As tabulating in section 2.3; Login, Sign Up were done according to Requirements(Here, the requirement 1.1.1.1.1.2, 1.1.1.1.2.2, 1.1.1.2.3, 1.1.1.3.2 could not be finished, those are in progress as well.). However, just Recommend Event function is there as page. Parts were done are successfully working. So, API is working properly.

Since there are some points not finished yet, we will surely shift them to aims of Milestone #2. That is to say, project plan shifts below. Yet, this will not be a big problem because there are not just a lot of missing points.

4.Work

Group Member	Team	Contribution
Ömer Kırbıyık	Front-end	Designed login page, sign up page, and recommended events page. Implemented the integration between pages and API endpoints.
Abdurrahman Dilmaç	Back-end	Set up user system, managed user sign up and login processes, implemented user and authentication related API endpoints.
Mert Aközcan	Back-end	Set up production environment on Heroku and implemented Event and its related models' API endpoints.
Zeynep Işık	Android	Designed sign up and change password pages. Helped the implementation of services for connecting API Endpoints.
Mustafa Alparslan	Android	Implemented the services for integration between pages and API Endpoints. Completed the missing points in the

		application.
Atıf Emre Yüksel	Android	Designed login and profile pages. Helped the implementation of services for connecting API Endpoints.
Anıl Seyrek	Back-end	----
Erkam Ağralı	Front-end	----
Fatih Maytalman	Back-end	----

5.Requirements

Glossary

Admin: A person who is responsible for the sustainability of the system.

Annotation: Explanatory content attached to an event compatible with W3C standards.

Comment: The response of users about activities of the other users or their profile, which can be voted by the others.

Community: A group of people sharing the same or similar interests and having communication or/and collaboration among themselves.

Database: An organized collection of data to store users' data safely.

Event: A cultural meeting that has a certain place and a specific time interval fields such as theater, cinema demonstration, opera, concert, book discussion, etc.

Event history: History of events which the user attends in the past, which is shown in his/her profile.

Follow: Users can follow the events attended by the specific user and his/her profile by this feature.

Google Maps API: Data gives you exact real-time information for locations, mapping, and navigation.

Guest: A person who is not registered and not having user privileges but viewing public pages.

Item: An article, an image or basically anything a user shares on the platform.

Password: Minimum 8 maximum 20 characters of a secret sequence used to identify a user and grant the user with member user abilities.

Profile: Profile: A number of specific information about a user containing his/her interests and events s/he attends.

Recommendation: Suggesting an event liked by a user to other users or recommending users to follow.

Sign-up: When a new user registers by giving intended personal information by the system.

System: The whole environment of the Cultidate Project including Web, Mobile, server-side, databases, cold storages.

Tag: A descriptive word or phrase to define an item defined and can be searched better.

User: A person who has an account on the community.

Username: User specific unique characters to identify a user.

Vote: The rating system allowing users to vote and comment the other users or events positively or negatively.

1. Functional Requirements

1.1. User Requirements

1.1.1 Member User Requirements

- **1.1.1.1 Sign-Up**
 - 1.1.1.1.1 Users shall sign up by following one of the following procedures.
 - 1.1.1.1.1.1 Users shall provide a name, surname, username, password, e-mail address.
 - 1.1.1.1.1.1.1 Users shall verify their e-mail addresses by following the steps in the confirmation mail sent by the system.
 - 1.1.1.1.1.1.2 User emails and usernames shall be unique.

- 1.1.1.1.1.3 Passwords shall be no shorter than 8 characters and no longer than 20 characters.
 - 1.1.1.1.1.2 Users shall sign up using their Facebook accounts.
- **1.1.1.2 Login**
 - 1.1.1.2.1 Users shall login using their username and password.
 - 1.1.1.2.2 Users shall login using their Facebook account.
 - **1.1.1.2.3 Resetting Password**
 - 1.1.1.2.3.1 In case of a user forget the account password, a password reset link is to be sent to the user's email address.
 - 1.1.1.2.3.2 A user who gets a reset link should be able to reset the password by going the unique link provided in the email.
- **1.1.1.3 Profile**
 - 1.1.1.3.1 Users shall have a profile which includes but is not limited to their information bio, interests.
 - 1.1.1.3.2 Users shall be able to edit their profiles.
 - **1.1.1.3.3 Profile Visibility**
 - 1.1.1.3.3.1 Users should be able to configure their profile visibility options.
- **1.1.1.4 Contribution**
 - 1.1.1.4.1 Users shall be able to create events.
 - 1.1.1.4.2 Users shall be able to follow events.
 - 1.1.1.4.3 Users shall be able to share events.
 - 1.1.1.4.4 Users shall be able to add photos to the events they created.
 - 1.1.1.4.5 Users shall be able to edit performing artist, location, date, price information of the events they created.
 - 1.1.1.4.6 Users shall be able to comment on events and other users' profile.
 - 1.1.1.4.7 Users shall be able to mark their attendance status to the events by choosing attend, will attend, maybe, won't attend, or block options.
- **1.1.1.5 Messaging**
 - 1.1.1.5.1 Users shall be able to send private messages to other users unless at least one of the messaging parties is blocked by the other.
- **1.1.1.6 Tagging**
 - 1.1.1.6.1 Users shall be able to tag their items such as creating a tag or using an existing one.
- **1.1.1.7 Searching**
 - 1.1.1.7.1 Users should be able to search users and events semantically by means of the following services.
 - 1.1.1.7.1.1 They shall be able to make location-based filtering.
 - 1.1.1.7.1.2 They shall be able to make tags filtering.

- 1.1.1.7.1.3 They shall be able to find events by searching with relevant keywords.
- **1.1.1.8 Notifications**
 - 1.1.1.8.1 Users should be able to get notification of friends requests when other users send a request.
 - 1.1.1.8.2 Users should be able to get notification of private message sent by other users, which can be seen in their message page.
- **1.1.1.9 Blocking**
 - 1.1.1.9.1 Users should be able to block certain users.
 - 1.1.1.9.2 A blocked user by another user shall not be able to see each other's profile and items.

1.1.2 Guest User Requirements

- 1.1.2.1 Guest users shall be able to only view events and actions taken by members whose profile visibility is set to be open to the public.
- 1.1.2.2 Guest users shall not be able to take any other action.

1.2. System Requirements

- **1.2.1 Content**
 - 1.2.1.1 Users shall have the freedom to create an item and an event.
 - 1.2.1.2 Users shall be able to delete their items and events.
 - 1.2.1.3 Users shall be able to edit their items and events.
 - 1.2.1.4 The system shall provide enough information about an artist, event date, and event price.
- **1.2.2 Recommendations**
 - 1.2.2.1 Users shall be able to get recommendations for events based on their event histories.
- **1.2.3 Interface**
 - 1.2.3.1 Project interface language shall be English.
- **1.2.4 Annotations**
 - 1.2.4.1 Users shall be able to annotate the event information and multimedia that may have been added to an event page with explanations, questions, and answers.
 - 1.2.4.2 System shall allow annotation including geographical references by using Google Map API.
 - 1.2.4.3 System shall allow text formatted annotation.

- 1.2.4.4 System shall allow image formatted annotation.
 - 1.2.4.5 System shall allow links which may be semantic resources to provide more detailed information about the event.
- **1.2.5 Search**
 - 1.2.5.1 The system shall be able to perform semantic searches as specified by the users.
 - 1.2.5.2 The application should allow a semantic search to be made.
 - 1.2.5.3 The system should be able to use a given location when a user searches events in the platform.
- **1.2.6 Database**
 - 1.2.6.1 The system shall store data in the database.
 - 1.2.6.2 The system shall update data in the database.
 - 1.2.6.3 The system should make integrity check once in two weeks to prevent data loss.
- **1.2.7 Voting**
 - 1.2.7.1 System shall be able to store voting data coming from users.
 - 1.2.7.2 System shall be able to retrieve voting data coming from users.

2. Non-Functional Requirements

2.1 Security and Reliability

- 2.1.1 Data of users shall be protected and used according to [LAW ON THE PROTECTION OF PERSONAL DATA \(Kişisel Verilerin Korunması Kanunu\)](#)
- 2.1.2 Users' email addresses shall not be reachable by other users or the public.
- 2.1.3 Users' passwords shall be stored with encryption in the database.
- 2.1.4 Users shall get notification emails when they change their password.
- 2.1.5 Captcha method shall be enabled while registering to prevent malicious bots.
- 2.1.6 Weekly periodic backups shall be taken to ensure data is safe and sound.
- 2.1.7 In case of server failure and in the need, the system shall be restored with the latest backup.

2.2 Performance

- 2.2.1 The system should be able to respond to requests within 4 seconds.
- 2.2.2 100 requests per seconds should be responded.

- 2.2.3 The system shall be able to serve at least 20000 members.

2.3 Availability

- 2.3.1 Project shall be available on both Android and Web platform.
- 2.3.2 Compatibility with Google Chrome, Opera([Chromium based browsers](#)), Firefox, Safari and Edge should be ensured.
- 2.3.3 The system should be guaranteed to be accessible always except for maintenance times.
- 2.3.4 System should be available 95% of the time.
- 2.3.5 In the case of a failure, the system should recover in at most 1 hour.

2.4 Database

- 2.4.1 Data shall be held in a secure database.
- 2.4.2 Database hierarchy shall be constructed in such a way that it is efficient and protects the privacy of users' data.
- 2.4.3 All changes' logs shall be kept in a database.`

2.5 Annotations

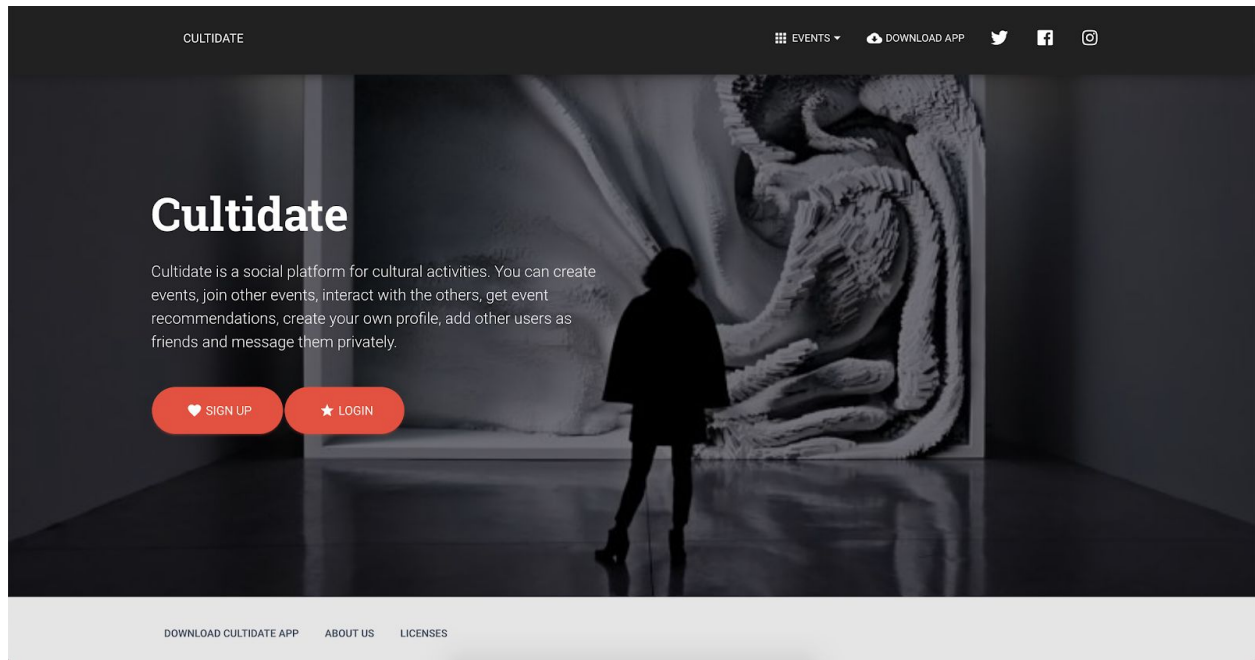
- 2.5.1 [The W3C Web Annotation Data Model](#) shall be used for annotation.
- 2.5.2 The annotations shall be stored and retrieved based on [Linked Data Platform](#).
- 2.5.3 JSON-LD format shall be used for annotation representation according to W3 documentation.
- 2.5.4 The annotations shall be tested by the test team to ensure that they work correctly.
- 2.5.5 Suggestion of annotation should allow urls while creating an annotation.
- 2.5.6 Retrieving annotations shall be allowed for all users.
- 2.5.7 Creating annotations shall be allowed for only registered users.
- 2.5.8 Updating and deleting annotations shall be allowed only if the online user is the owner of the annotation.

2.6 Accessibility

6. 2.6.1 The system shall be accessible on Android version 6.0 and higher and web platforms.
7. 2.6.2 The web platform shall be responsive to screen sizes of various sizes.

7.Design

7.1. Web





CULTIDATE


EVENTS ▾


DOWNLOAD APP


Twitter Facebook Instagram


First Name 

Last Name 

Username 

Email 

Birthdate
11.04.2018 

Password 

SIGN UP


[LOGIN INSTEAD?](#)


CULTIDATE

EVENTS ▾

DOWNLOAD APP

Twitter Facebook Instagram

Username 

Password 

LOGIN

[SIGN UP INSTEAD?](#)

DOWNLOAD CULTIDATE APP

ABOUT US

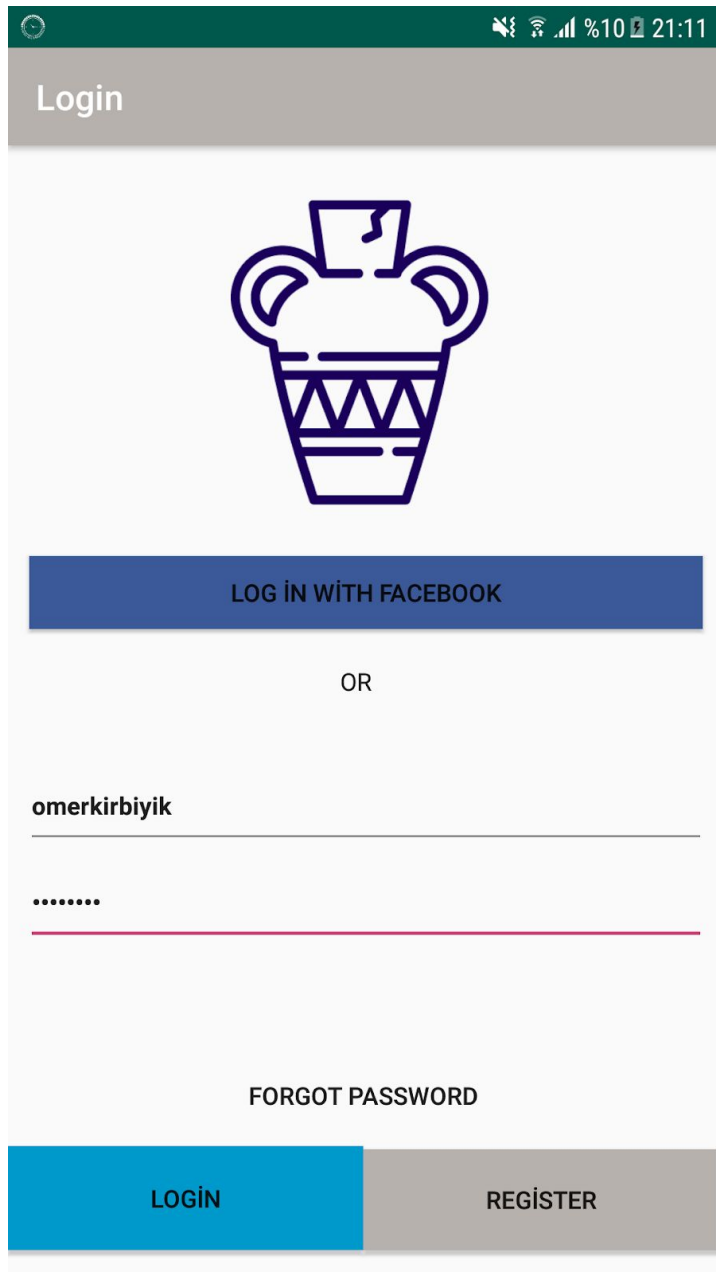
LICENSES

Recommended Events

Don't miss events any more.



7.2.Android





%11 21:12

Register

LOGİN WITH FACEBOOK

Ömer

Kırbıyık

omerkirbiyik

kirbiyik@cultidate.com

.....

.....

SİGNUP



📶 %11 🔋 21:14

ProfilePage



Ömer Kırbyık

Singer

Turkish classical music

4
events

7
followers

10
followings

Culddate

First Name Ömer

Last Name Kırbiyık

Username omerkirbiyik

Email kirbiyik@cultidate.com

Password group6theBest

CHANGE
PASSWORD

8. Project plan

		Days	Start Date	End Date	Assignee		
	Cultidate+		07.8.10.2018	08.00	14.12.2018	17.00	
Front End	Implementation	50	10.09.18 8.00 AM	11.07.18 5.00 PM	Everyone		
		38	10.09.18 8.00 AM	1.05.18 5.00 AM	Omni	And	
Users	Login	3			Omni		
		2	2018-10-02		Omni		
	Facebook Login	1	2018-10-07		Omni		
		2			Omni		
	Register	4			Omni		
		2	2018-10-11		Omni		
	Facebook Login	1	2018-10-16		Omni		
		1	2018-10-19		Omni		
	Events	2			Omni		
		1	2018-10-26		Omni		
Miscellaneous 1	Home Page	1	2018-10-27		Omni		
		1	2018-10-27		Omni		
	Events	1	10.07.18 8.00 AM	10.09.18 5.00 PM			
		10	10.07.18 8.00 AM	1.04.18 5.00 PM			
	Create	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Omni		
		1	10.07.18 8.00 AM	10.09.18 5.00 PM	And		
	Edit	2	10.07.18 8.00 AM	10.09.18 5.00 PM	Omni		
		2	10.07.18 8.00 AM	10.09.18 5.00 PM	Omni		
	Subscribe	3	10.07.18 8.00 AM	10.09.18 5.00 PM	And		
		2	10.07.18 8.00 AM	10.09.18 5.00 PM	Omni		
Search	Leave	1	10.07.18 8.00 AM	10.09.18 5.00 PM	Omni		
		5	10.07.18 8.00 AM	10.09.18 5.00 PM	And		
	Upload Media	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Omni		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	And		
	Share	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Omni		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	And		
	Comment	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Omni		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	And		
	Set Attendance Status	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Omni		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	And		
Miscellaneous 2	Add Tags	4	10.09.18 8.00 AM	1.04.18 5.00 PM	Omni		
		6	1.04.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	User	2	1.14.18 8.00 AM	1.14.18 5.00 PM	Omni		
		5	1.14.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Event	4	1.15.18 8.00 AM	1.15.18 5.00 PM	Omni		
		2	1.15.18 8.00 AM	1.15.18 5.00 PM	And		
	Filtering	2	1.15.18 8.00 AM	1.15.18 5.00 PM	Omni		
		2	1.15.18 8.00 AM	1.15.18 5.00 PM	Omni		
	Tag-based	2	1.15.18 8.00 AM	1.15.18 5.00 PM	Omni		
		2	1.15.18 8.00 AM	1.15.18 5.00 PM	Omni		
Android	Recommended Events	4	1.16.18 8.00 AM	1.16.18 5.00 PM	And		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Production	2	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Deployment	1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Users	38	10.09.18 8.00 AM	1.12.18 5.00 AM	Zhang	Musala	
		10	10.09.18 8.00 AM	1.12.18 5.00 AM	Omni		
	Sign Up	2	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
		3	10.09.18 8.00 AM	10.10.18 5.00 PM	Omni		
Users	Login	3	10.09.18 8.00 AM	10.10.18 5.00 PM	Omni		
		2	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
	Facebook Login	3	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
		3	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
	Account Settings	3	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
		2	10.09.18 8.00 AM	10.10.18 5.00 PM	Omni		
	Update User Name	2	10.09.18 8.00 AM	10.10.18 5.00 PM	Musala		
		2	10.09.18 8.00 AM	10.10.18 5.00 PM	Musala		
	Update E-mail	2	10.09.18 8.00 AM	10.10.18 5.00 PM	Musala		
		2	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
Miscellaneous 3	Update Password	2	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
		5	10.09.18 8.00 AM	10.10.18 5.00 PM	Omni		
	Profile Settings	3	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
		5	10.09.18 8.00 AM	10.10.18 5.00 PM	Omni		
	Set Profile Picture	2	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
		2	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
	Bio	2	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
		2	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
	Interest	2	10.09.18 8.00 AM	10.10.18 5.00 PM	And		
		3	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
Miscellaneous 4	Follow	2	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
		7	10.09.18 8.00 AM	10.10.18 5.00 PM	Musala		
	Message	1	10.09.18 8.00 AM	10.10.18 5.00 PM	Omni		
		58	10.09.18 8.00 AM	1.04.18 5.00 PM			
	Events	2	10.09.18 8.00 AM	10.10.18 5.00 PM	Zhang		
		1	10.07.18 8.00 AM	10.09.18 5.00 PM	Zhang		
	Edit	2	10.07.18 8.00 AM	10.09.18 5.00 PM	Zhang		
		2	10.07.18 8.00 AM	10.09.18 5.00 PM	Zhang		
	Cancel	2	10.07.18 8.00 AM	10.09.18 5.00 PM	Zhang		
		3	10.07.18 8.00 AM	10.09.18 5.00 PM	And		
Back End	Subscribe	2	10.07.18 8.00 AM	10.09.18 5.00 PM	And		
		1	10.09.18 8.00 AM	10.09.18 5.00 PM	And		
	Leave	1	10.09.18 8.00 AM	10.09.18 5.00 PM	And		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	Musala		
	Upload Media	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Musala		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	Omni		
	Share	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Musala		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	Musala		
	Comment	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Musala		
		5	10.09.18 8.00 AM	10.09.18 5.00 PM	Musala		
Miscellaneous 5	Set Attendance Status	2	10.09.18 8.00 AM	10.09.18 5.00 PM	Zhang		
		4	10.09.18 8.00 AM	1.04.18 5.00 PM	Omni		
	Add Tags	6	1.04.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		2	1.14.18 8.00 AM	1.14.18 5.00 PM	Omni		
	User	2	1.14.18 8.00 AM	1.14.18 5.00 PM	Musala		
		5	1.14.18 8.00 AM	1.17.05.18 5.00 PM	Musala		
	Event	4	1.15.18 8.00 AM	1.15.18 5.00 PM	Zhang		
		2	1.15.18 8.00 AM	1.15.18 5.00 PM	Zhang		
	Filtering	2	1.15.18 8.00 AM	1.15.18 5.00 PM	Zhang		
		2	1.15.18 8.00 AM	1.15.18 5.00 PM	Zhang		
Miscellaneous 6	Tag-based	2	1.15.18 8.00 AM	1.15.18 5.00 PM	Zhang		
		2	1.15.18 8.00 AM	1.15.18 5.00 PM	Zhang		
	Recommended Events	4	1.16.18 8.00 AM	1.16.18 5.00 PM	And		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Production	2	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Deployment	1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	W3C Annotations	2	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
Review	Back Up	1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	Code Review	4	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
		6	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Omni		
	User Test	10	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Everyone		
		7	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Everyone		
	Miscellaneous 7	3	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Everyone		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Everyone		
	Project Finish	1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Everyone		
		1	1.17.05.18 8.00 AM	1.17.05.18 5.00 PM	Everyone		

You can reach the project plan in detail by clicking the [link](#).

8.Evaluation of tools and managing project

a.Backend

All features planned to implement until Milestone 1 were completed. After detailed discussions about model and data structure in our project, Abdurrahman and Mert implemented API endpoints and deployed the project to Heroku.

Tool	Evaluation
Django	Modern, efficient, well-structured web framework for Python
Django Rest Framework	Powerful and flexible library for building REST API's in Django
Postman	Easy-to-use and powerful tool for testing API's
Heroku	Production environment that provides continuous integration & delivery, ready-to-use web server and database services. Heroku makes it easier to deploy and manage the web application.

b.Frontend

All features planned to implement until Milestone 1 were not completed because merely Ömer Kırbıyık implemented the all pages showed in the Milestone 1 presentation by himself.

Tool	Evaluation
React JS	Have a solid structure but can be complex while implementing simple methods.
Visual Studio Code	Modern text editor with almost no defect.
React Router	Non-intuitive API
Npm Package Manager	Easy to use and manage requirements.

c. Android

All features planned to implement until Milestone 1 were not completed. Atıf Emre Yüksel, Zeynep Işık and Mustafa Alparslan worked for it. However, they did not have enough experience and so had challenges in some issues. That is why one page could not be done on time.

Tool	Evaluation
Android Studio	Integrated Development Environment (IDE) for Android app development