

FireFat Weight Control Application

Capstone Project Proposal

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Software Capstone Proposal - COMP 10246

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1. Background

1.1 Description

The application aims to help people to lose weight. A group sets up a competition, where the winner is the individual with greater percentual weight loss. Between the start date and final date, all competitors must publish their weights in a periodic basis. A fee is applied to whom does not achieve the minimum weight loss in the elapsed time between the last and current weight measurements. Throughout the competition, all collected fees are saved, and the final amount is the winner's prize. The app will allow each individual to enter its weight, enter its fee payments, see its progress, see the overall group progress, and the amount saved for the final prize.

We all know that obesity is a big problem in the world, and part of the problem is to keep yourself on a diet. To lose weight, you must control what you eat and do exercises. People struggle with the control what you eat part. It is better when you are doing tough things in a group, with a touch of competition. So, this application can help with that, since it is a competition where who loses more weight will earn a prize at the end.

1.2 Project Scope

Since this application works with a percentage measurement of the weight loss, it will be developed for adults. It is hard to apply these rules to children or teenagers because they are in growing process, which means no pattern of metrics. For example, if they gain weight it is not possible to identify whether it was due to their growth or to overeating. Because of that, this App will be used by any adult who wants to lose weight.

The main inspiration was not a Web App, but a group activity started in 2015 for mutual motivation to lose weight. A group of friends, led by my sister, set up a WhatsApp group, a start and end date, and a fee. Every Friday, they must send a picture of the scale with their weight, and who does not lose

at least 100g, pays a fee. The payments are collected and deposited in a piggy bank. By the end of the game, whoever has lost the greatest percentual weight wins the piggy bank, with all the money saved from the fee payments.

In order to turn the game into an app, the Secret Santa Web App was an inspiration. With it, I realized the possibility of generalizing the weight loss app for multiple groups of users. Below we have two URLs of Secret Santa Web Apps.

- <https://www.secretsantaorganizer.com/>
- <https://www.elfster.com/>

2. Application Type

The FireFat is a Web Application, to be developed as a Single Page Application, and responsive to small devices.

3. Development Stack

The list below presents the technologies, languages, frameworks, and tools that will be used to develop, test, and deploy the application.

HOST

- Azure

It is free and compatible with the selected technologies.

FRAMEWORKS

- ASP.NET Core Web API

Besides being a Microsoft framework, cross-platform, open source, high performance, and with a rich library, it is the most familiar backend framework for me. I had four courses that used .NET: Programming in .NET, Software Quality & Testing, Web Applications for ASP.NET, and Advanced Programming in .NET. This framework provides the API end points, the authentication, the real time communication, and the database connection.

- Angular

It is a popular JavaScript framework, and I have been using it for one year. The framework provides routing, lazy loading, and HTTP module.

- Ionic

Built on top of Angular, Ionic provides web components suitable for mobile use.

- xUnit

It is a Microsoft framework recommended for ASP.NET Core unit tests.

- Selenium

It is a popular framework for Web Application tests.

DATABASE

- SQL Server

Microsoft relational database, compatible with .NET and Azure.

LANGUAGES

- C#

It is the ASP.NET Core language.

- TypeScript

It is the Angular language.

- SQL

It is the SQL Server language.

IDEs

- Visual Studio Enterprise

Microsoft IDE for ASP.NET framework.

- Visual Studio Code

It a very popular IDE, and I have been using it with Angular.

- Microsoft SQL Server Management Studio

It is the Microsoft IDE for SQL Server.

VERSION CONTROL

- GIT

The most popular version control, and the only one I have used.

REMOTE REPOSITORY

- GitHub

The most popular code repository, and the only one I have used.

4. Functionality Chart

The table below presents the app's functionalities, based on the user role. The last two rows show automated functionalities, which will be performed by the app.

TABLE 1 - FUNCTIONALITY CHART.

Feature	Standard User	Group Leader	Admin
Create, edit, and delete a standard user account	X		
Sign-in and sign-out	X		X
Create a new game (the standard user who creates a game is the group leader of that game)	X		
Search and filter the list of games	X		
Apply to be a game participant	X		
Approve a participant to a game		X	
Set the current game (user preference)	X	X	
Enter own weight on scheduled day	X	X	
Enter or edit any participant's weight on any day		X	
Enter own payment	X	X	
Enter any participant's payment		X	
Set the own vacation start date	X	X	
Set any participant's vacation start date		X	
View own progress	X	X	
View the group participants, sorted by percentual weight loss	X	X	

Read and send messages to the group	X	X	
Execute CRUD over the whole database			X
Get the list of all groups' average weight loss, sorted by either weight loss, percentual weight loss, or most recent			X
Get the list of all participants, from all groups, sorted by either weight loss, percentual weight loss, or most recent			X
Export the lists as JSON file for further statistics analysis, anonymized			X
(Automatically) Charge the participant who fail to enter the weight on scheduled date			
(Automatically) Send a congratulation message to the group forum when a participant reaches the goal			

5. Project Functionality and Flow

The data handled by the App will be: the game setup, the weights, and the payments. At the end of this document, we have a photo gallery of past games, where we can find all data handled during the play. Below we have real data, which would be stored in the database.

User

- user_id: “pgteles@uol.com.br”,
- first_name: “Patricia”,
- last_name: “Teles”,
- current_game: 1, (game_id from the game setup),
- user_height: 1.66

Game

- game_id: 1,
- game_admin: “pgteles@uol.com.br”, (group leader user_id)
- creation_date: 2021/01/22,
- game_name: “Taliban 2021”,
- start_date: 2021/01/29,
- end_date: 2021/12/22,
- frequency: “weekly”,
- min_weight_loss: 0.1,
- weight_uni: “kg”,
- game_fee: 10.00, (approximately 2.50 CAD)
- currency: “BRL”,
- vacation_length: 4,
- last_weight_paid: false,
- is_active: true

Group

- game_id: 1,
- user_id: “tiago.franco-de-goes-teles@mohawkcollege.ca”,
- weight_goal: 83,
- vacation_start: “2021/06/04”
- status: standardUser (options: applied, standardUser, groupLeader, denied)

Schedule

- game_id: 1,
- schedule_id: 1,
- weight_date: “2021/01/29”

Weight

- game_id: 1,
- user_id: “tiago.franco-de-goes-teles@mohawkcollege.ca”,
- schedule_id: 1, (must be a date within the game schedule)
- weight: 94.0

Payment

- game_id: 1,
- user_id: “tiago.franco-de-goes-teles@mohawkcollege.ca”,
- payment_date: “2021/05/24” (any date)
- amount: 20.00

The core functionality is to execute CRUD operations over the app collections, and the main metric is the body weight. Also, the app has the following extended functionalities.

- Discussion forum.
- Each user can only enter the weight on the schedule date; if the user does not enter it, the App applies the charge as if one did not lose the minimum weight.
- Once a user reaches the weight goal, the app sends a congratulation message to the group forum automatically.

There are 3 roles: standard user, group leader, and admin, as described below.

Standard user:

- CRUD over base collection.
- Applied to a group, enter weight, enter payment, view personal progress, view group ranking.
- Must have a user profile (editable).

Group leader:

- CRUD over base collection.
- Must have a user profile (editable)
- Besides the standard user functionalities, the group leader accepts or not user's application to be part of the group, can enter or edit weight or payment of all participants.

Admin:

- Generate charts for specific items showing stats over time.
- Execute CRUD over the whole database.
- Get the list of all groups average weight loss, sorted by either weight loss, percentual weight loss, or most recent.
- Get the list of all participants, from all groups, sorted by either weight loss, percentual weight loss, or most recent.
- Export the lists as JSON file for further statistics analysis, anonymized.

5.1 Mockups with Descriptions

The following figures show the screen mock-ups of the capstone project. The app functionalities are distributed in 4 tabs: “Home”, “Play”, “Info”, and “Message”. Each tab has clickable cards, where the users can access a related page. An exception is the message tab, which is a group chat. The mock-ups were developed using an open-source tool, called Evolus Pencil.

LANDING PAGE

When the users first access the app, they see the sign in page. Figure 1 shows the landing page on a desktop screen, and figure 2 on a mobile one.



FIGURE 1 - SIGN IN PAGE ON A DESKTOP SCREEN.

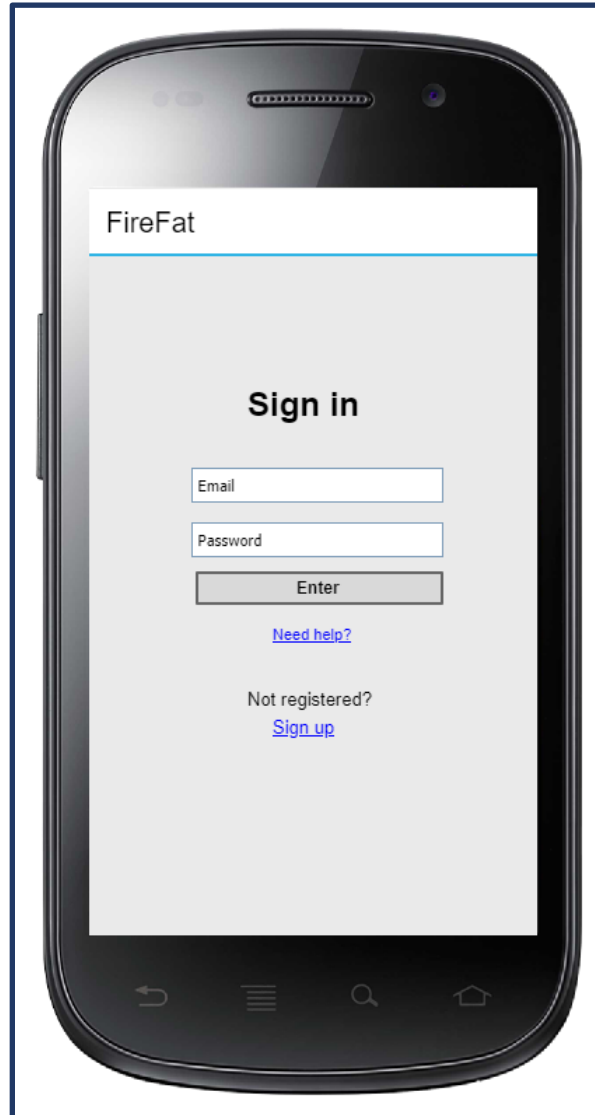


FIGURE 2 - SIGN IN PAGE ON A MOBILE SCREEN.

From the sign in page, the users are able to access the app by entering their credentials, register as a new user by clicking on the sign-up link, or read game instruction by clicking on the help link.

The figure 3 shows the sign-up page, where the users create their account. The users can participate in multiple games with the same account, which means each user has to sign-up only once.

FireFat: Weight Control

×

Signup

Email

User bio

First name

Last name

How do you want to be called?

Date of birth ▼

Height

Phone

Address

CREATE

FIGURE 3 - SIGN-UP PAGE.

The help page, figure 4, presents the game rules and how to sign-up and start playing.

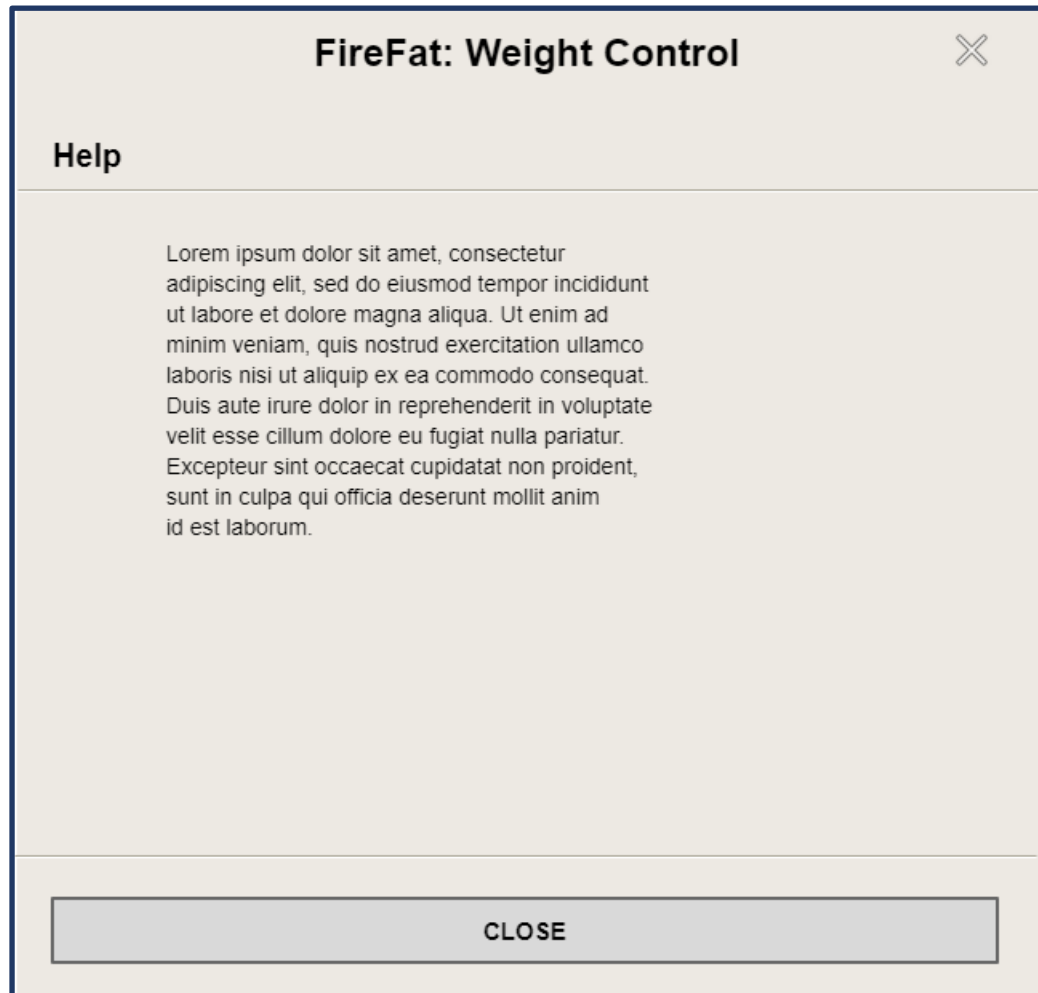


FIGURE 4 - HELP PAGE.

HOME TAB

When the users sign in, they reach the first tab, home, see figure 5. Within this tab, the users can access 4 pages: “Current Game”, “Apply to a Game”, “Create a New Game”, and “Profile”. The admin users have a fifth page to access, called “Admin”.

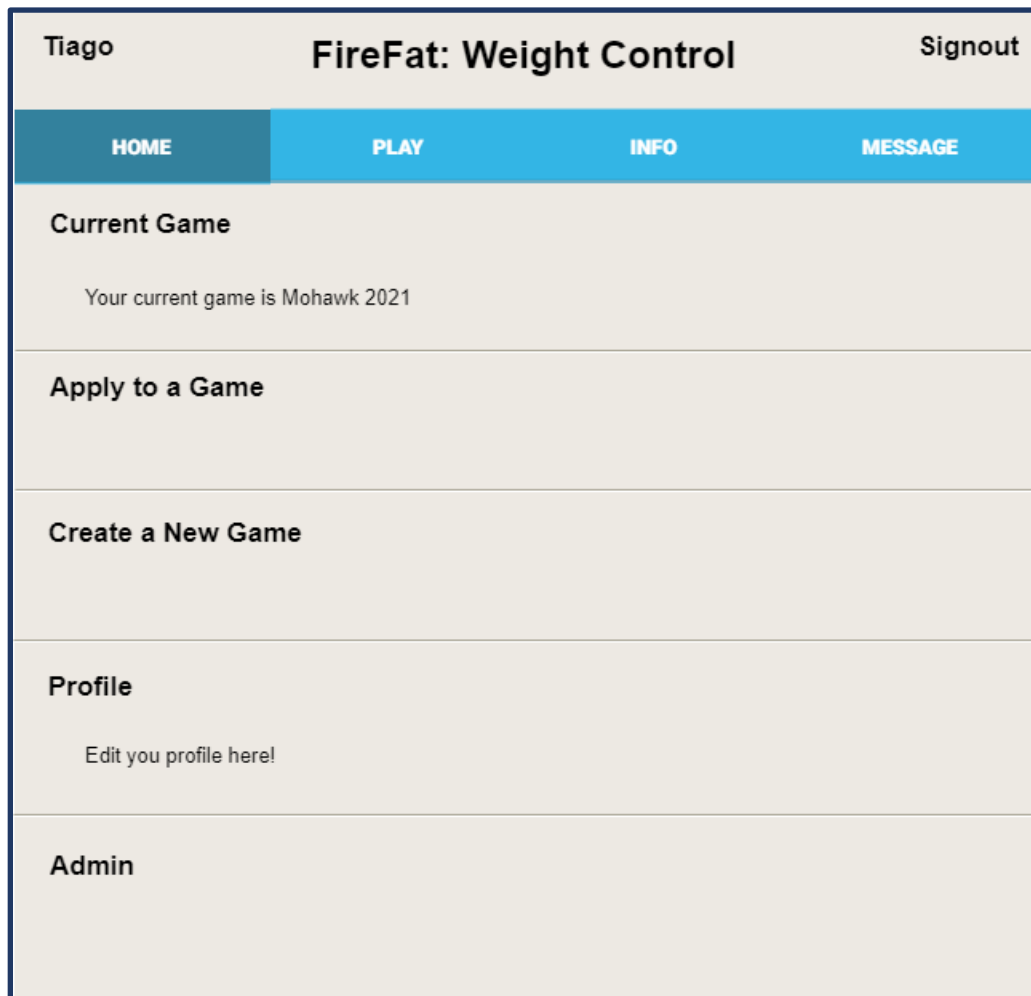


FIGURE 5 - HOME TAB.

The “Current Game” page allows the users to set up the current game, figure 6. Since the users can participate in multiple games, one of them can be set up as the preferred game. In this context, preferred and current are synonyms. With a game set up as current, the other tabs are loaded with that game data.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Current Game

×

Your current game is: Mohawk 2021

If you want to change, select from the list below, and click the button.

Search for a game

SEARCH

Game 1

Game 2

Game 3

Game 4

CHANGE CURRENT GAME

FIGURE 6 - CURRENT GAME PAGE.

The “Apply to a Game” page allows the users to search the available games to play, and apply to be a member, figure 7. In order to apply, it is required to enter the weight goal.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Apply to a Game

X

Search a game to apply

Search for a game

SEARCH

Game 1

Game 2

Game 3

Game 4

And set your goal

Weight goal

Select weight unit ▼

APPLY

FIGURE 7 - APPLY TO A GAME PAGE.

The “Create a New Game” page allows the users to create a new game, by filling all the required settings, figure 8. The user who creates a game is its group leader, and, among other privileges and duties, will accept or deny applications.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Create a Game

×

Game name

Game description

Start date▼

End date▼

Minimum weight loss per weight date

Select weight unit▼

Game fee

Currency▼

Vacation length

CREATE

FIGURE 8 - CREATE A GAME PAGE.

The “Profile” page allows the users to update their profile information, figure 9.

The screenshot shows a web application interface for 'FireFat: Weight Control'. At the top, there's a header bar with the user's name 'Tiago' on the left, the application title 'FireFat: Weight Control' in the center, and a 'Signout' link on the right. Below the header is a navigation bar with four tabs: 'HOME' (highlighted in dark blue), 'PLAY' (light blue), 'INFO' (light blue), and 'MESSAGE' (light blue). The main content area is titled 'Profile' with a close button (X) in the top right corner. The profile form includes several input fields: 'Email', 'User bio', 'First name', 'Last name', 'How do you want to be called?', 'Date of birth' (with a dropdown arrow), 'Height', 'Phone', and 'Address'. At the bottom of the form is a large grey button labeled 'UPDATE'.

FIGURE 9 - PROFILE PAGE.

The “Admin” page, figure 10, is available to admin users only. It shows statistics of all games. Besides that, the admin person is able to act as group leader for any game, no matter who has created the game.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Admin

Total weight loss: 1,527 kg

Average weight loss: 162 kg / 5.4 %

Search for a game

SEARCH

Game 1	133 kg / 5.8 %
Game 2	89 kg / 3.1 %
Game 3	186 kg / 7.2 %
Game 4	114 kg / 4.9 %

CLOSE

FIGURE 10 - ADMIN PAGE.

PLAY TAB

From the “Play” tab, figure 11, the users have access to 3 pages: “Weight”, “Payment”, and “Vacation”. Additionally, the group leaders and Admins have access to the “Leader Duties” page.

Tiago		FireFat: Weight Control		Signout	
HOME		PLAY		INFO	
				MESSAGE	
Weight Your goal is 84.0 kg Your last weight was 92.4 kg					
Payment Your current debt is \$ 12.00 You have paid \$ 9.00 so far					
Vacation You have not taken your vacation yet, do you want to set it up?					
Leader Duties Mohawk 2021					

FIGURE 11 - PLAY TAB.

At the “Weight” page, figure 12, the users enter their weight. They can only do this at the scheduled weight day, which was set up during the game creation. Only the group leader and admins can enter anyone’s weight at any date.

The screenshot displays the 'FireFat: Weight Control' app interface. At the top, a header bar contains the user's name 'Tiago' on the left, the app title 'FireFat: Weight Control' in the center, and a 'Signout' button on the right. Below the header is a navigation bar with four tabs: 'HOME' (light blue), 'PLAY' (dark blue and currently selected), 'INFO' (light blue), and 'MESSAGE' (light blue). The main content area is titled 'Weight' with a close button (X) in the top right corner. It features a text input field with the placeholder text 'Enter your weight'. Below this field is a section labeled 'Scale picture:' which offers two options: 'File upload' (represented by a folder icon) and 'Camera' (represented by a camera icon), separated by the word 'or'. At the bottom of the form is a large, light gray button labeled 'ENTER'.

FIGURE 12 - WEIGHT PAGE.

At the “Payment” page, figure 13, the users enter their own payments. There is no restriction on the date to enter the payment. The group leader and admins can enter payments on behalf of other participants of that game.

Payment

Enter your payment

Receipt picture:

File upload or Camera

ENTER

FIGURE 13 - PAYMENT PAGE.

At the “Vacation” page, figure 14, the users can set up their own vacation start date. The vacation is a period in which the players do not enter their weights, and they are not charged for that. The vacation length is set up during the game creation. The group leaders and admins can enter vacation start date on behalf of other participants of that game.

Tiago
FireFat: Weight Control
Signout

HOME
PLAY
INFO
MESSAGE

Vacation
X

Enter your vacation start date to set it

Start date ▼

Vacation dates:

March 5, 2021
March 12, 2021
March 19, 2021
March 26, 2021

ENTER

FIGURE 14 - VACATION PAGE.

The “Leader Duties” page is accessed only by the group leader, the one that has created the game. At that page, the group leader can accept or deny participants, edit weights, edit payments, and edit vacations of anyone from the same group. The admins have that group leader privilege for all groups. The figure 15 shows the “Leader Duties” page, which is composed by vertically collapsible panels, also known as vertical accordion. Each functionality is accessed by its panel.

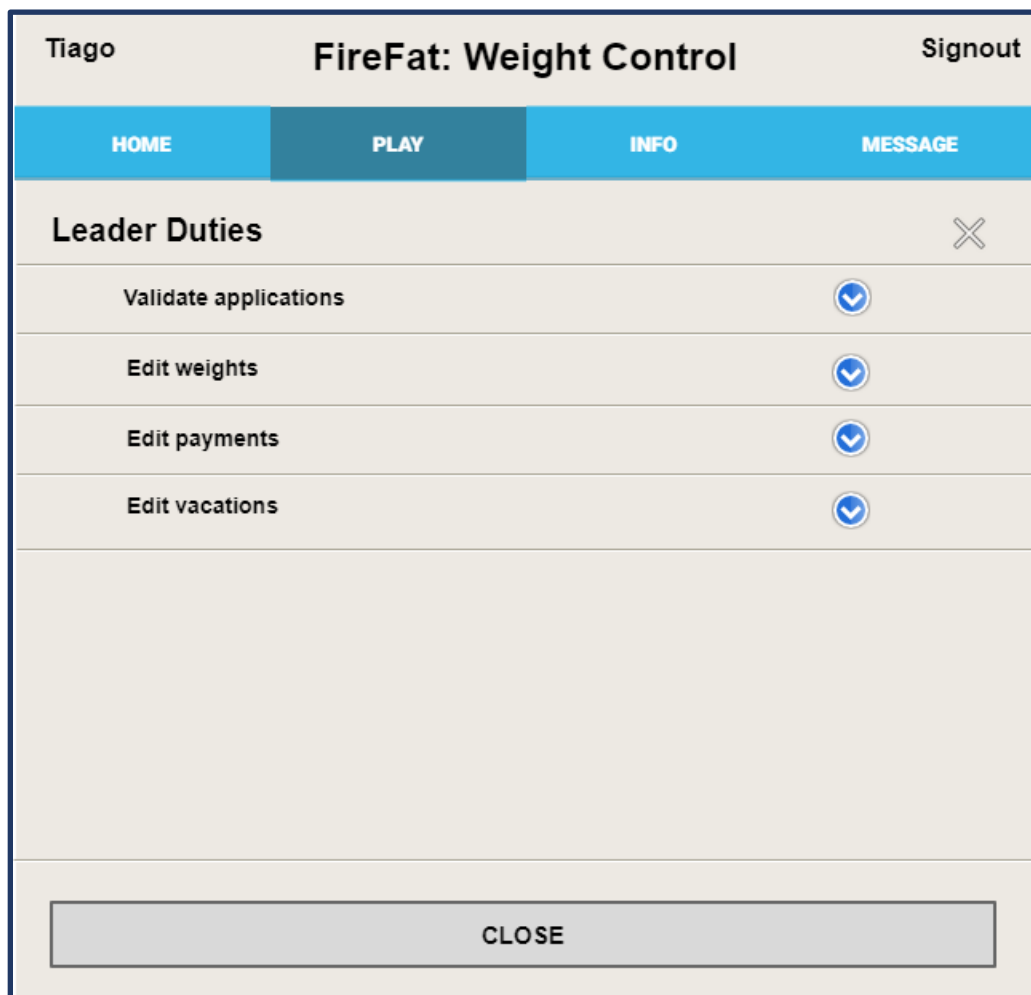


FIGURE 15 - LEADER DUTIES PAGE.

The figure 16 shows the “Validate applications” panel expanded, where the group leader or admin can accept or deny the participants’ applications.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Leader Duties

×

Validate applications

↑

+

James

×

+

Isabella

×

+

Sarah

×

Edit weights

↓

Edit payments

↓

Edit vacations

↓

SAVE

FIGURE 16 - LEADER DUTIES PAGE WITH VALIDATE APPLICATIONS EXPANDED.

The figure 17 shows the “Edit weights” panel expanded, where the group leader or admin can enter or update the weights of any member.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Leader Duties

×

Validate applications

⬇

Edit weights

⬆

Participant

▼

Date

▼

Weight

OK

Edit payments

⬇

Edit vacations

⬇

SAVE

FIGURE 17 - LEADER DUTIES PAGE WITH EDIT WEIGHTS EXPANDED.

The figure 18 shows the “Edit payments” panel expanded, where the group leader or admin can enter or update the payments of any member.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Leader Duties

×

Validate applications

⬇

Edit weights

⬇

Edit payments

⬆

Participant

▼

Date

▼

Payment

OK

Edit vacations

⬇

CLOSE

FIGURE 18 - LEADER DUTIES PAGE WITH EDIT PAYMENTS EXPANDED.

The figure 19 shows the “Edit vacations” panel expanded, where the group leader or admin can enter or update the vacations start date of any member.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Leader Duties

×

Validate applications

⌵

Edit weights

⌵

Edit payments

⌵

Edit vacations

⌴

Participant

▼

Start date

▼

OK

SAVE

FIGURE 19 - LEADER DUTIES PAGE WITH EDIT VACATIONS EXPANDED.

INFO TAB

From the “Info” tab, figure 20, the users have access to 4 pages: “Personal Progress”, “Group Ranking”, “Prize”, and “About FireFat”.

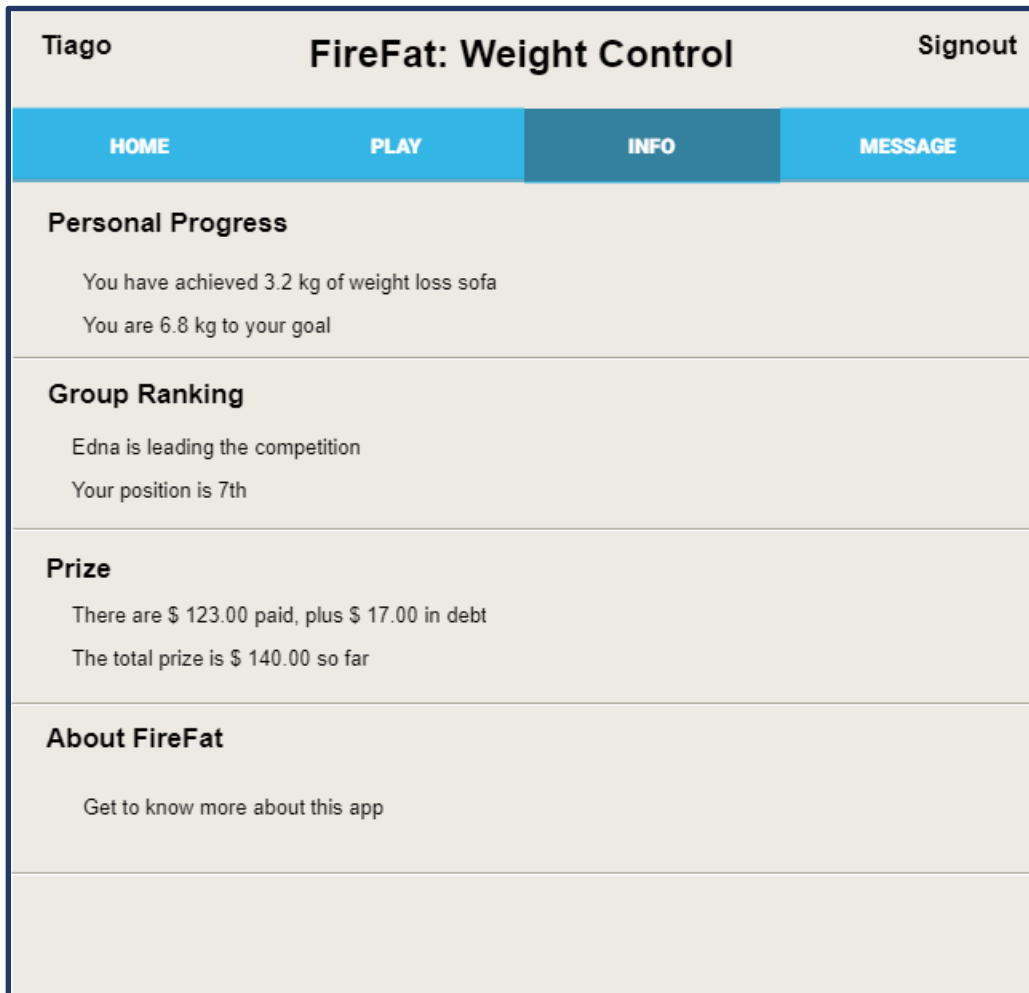


FIGURE 20 - INFO TAB.

The “Personal Progress” page shows all weights and fees, see figure 21.

Tiago
FireFat: Weight Control
Signout

HOME
PLAY
INFO
MESSAGE

Personal Progress
X

Initial weight: 94.0 kg

Goal: 83.0 kg

Min weight: 93.5 kg

Current weight loss: 93.5 kg or 0.5 %

Date	Weight	Fee
Mar-05	93.5 kg	-
Mar-12	93.8 kg	\$ 3.00

CLOSE

FIGURE 21 - PERSONAL PROGRESS PAGE.

The “Group Ranking” page presents the latest game result, sorted out from the greatest percentual weight loss to the lowest one, see figure 22.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Group Ranking

×

Result as of: February 19th, 2021

Position	Name	Weight Loss
1st	Anderson	5.7 %
2nd	Edna	4.9 %
3rd	Patricia	4.8 %
4th	Tiago	0.5 %

CLOSE

FIGURE 22 - GROUP RANKING PAGE.

The “Prize” page, figure 23, shows the payments and debts of all participants, which adds up to the winner’s prize.

Tiago

FireFat: Weight Control

Signout

HOME

PLAY

INFO

MESSAGE

Prize

×

Total prize:

\$ 140.00

Paid:

\$ 123.00

Debt:

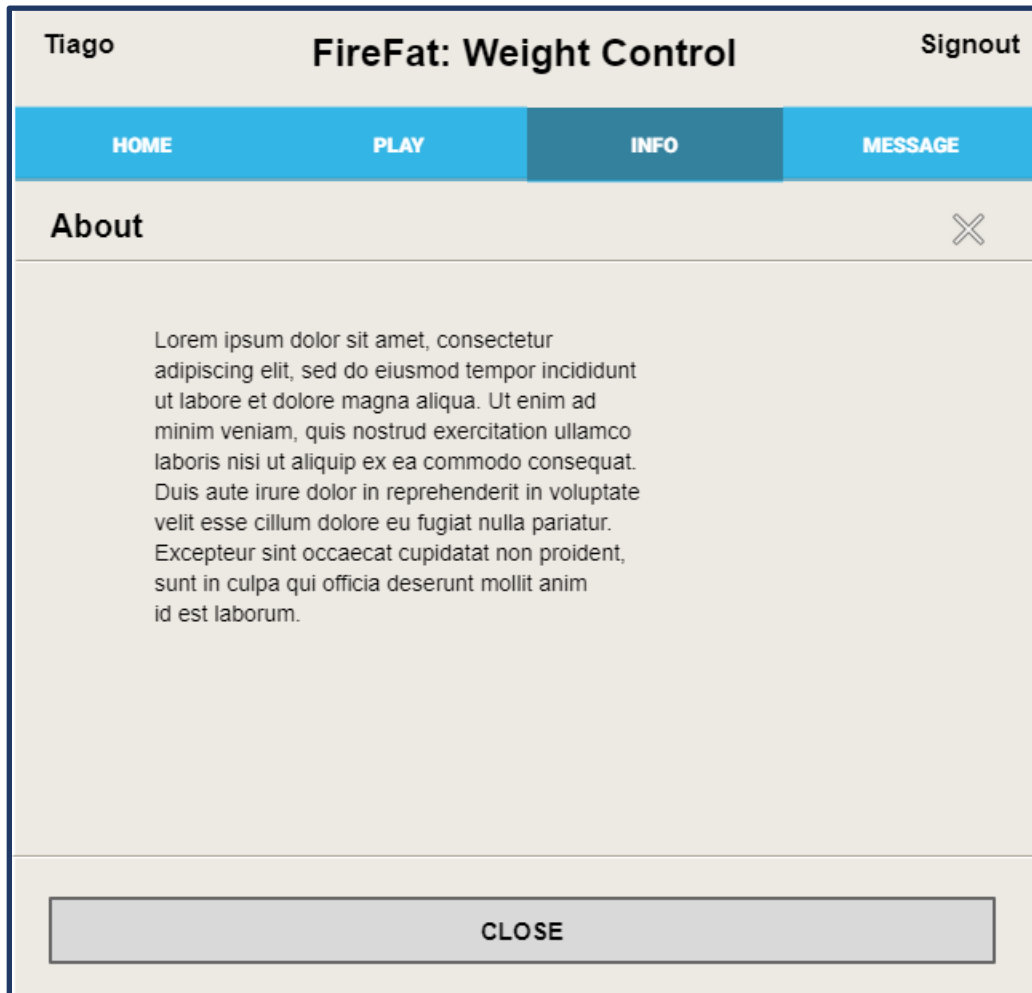
\$ 17.00

Name	Paid	Debt
Anderson	\$ 39.00	-
Edna	-	\$ 12.00
Patricia	\$ 9.00	\$ 3.00
Tiago	\$81	\$ 24.00

CLOSE

FIGURE 23 - PRIZE PAGE.

The “About” page tells the FireFat’s history, and the game rules, see figure 24.

**FIGURE 24 - ABOUT PAGE.**

MESSAGE TAB

The “Message” tab, figure 25, holds a group chat. Also, the app sends automatic messages about who is leading the competition, who has achieved the weight goal, the current total prize, and other game information.

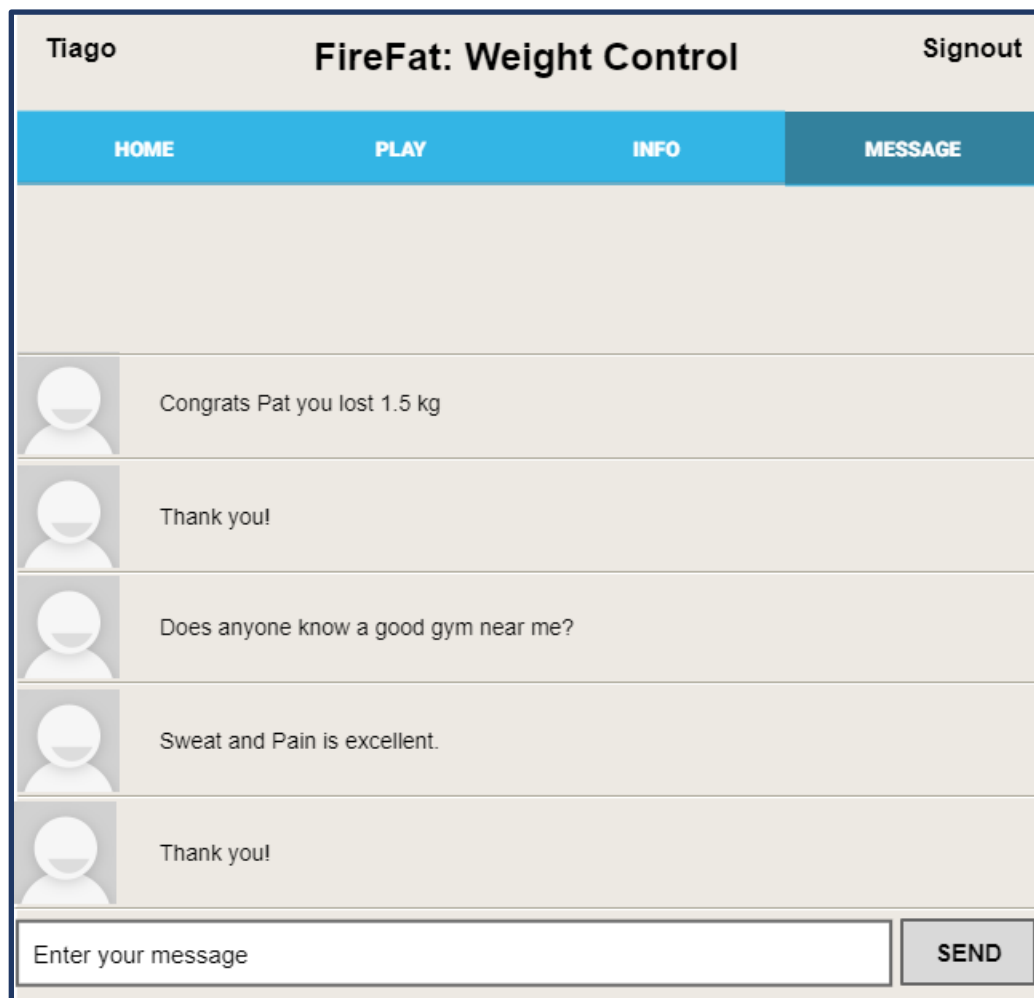


FIGURE 25 - MESSAGE TAB.

6. Database Schema

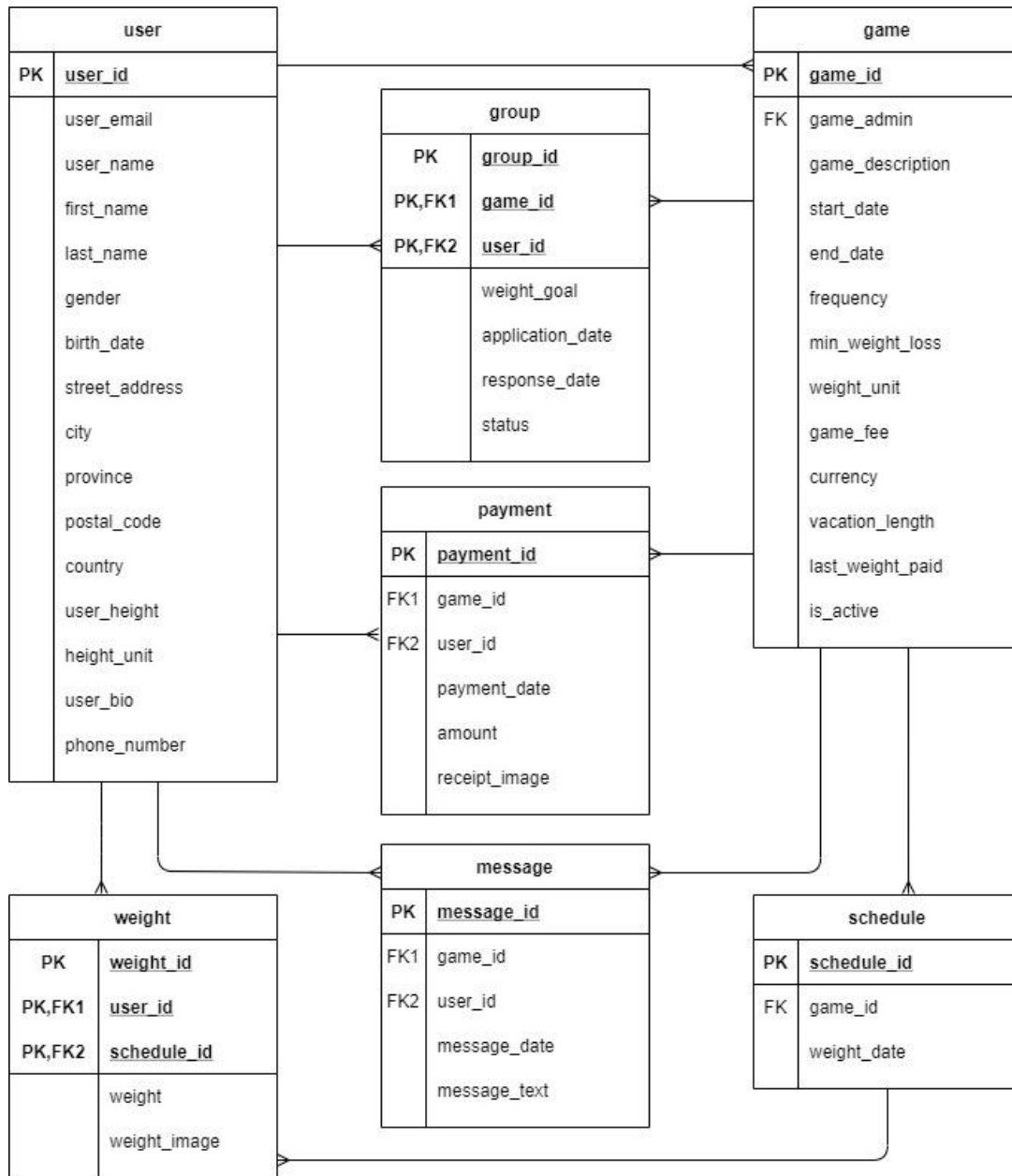


FIGURE 26 - FIREFAT ERD.

7. Test Plan

The tests to be executed are presented below, sorted in two categories: test-to-fail, and test-to-pass. When possible, automated tests will be developed and applied. For the server-side, the xUnit test framework will be used, and Selenium framework for the client side. Additionally, the application's alpha version will be tested by some of the current game participants.

7.1 Test-to-Fail

- Try to create a new user using an existing user's email credential.
- Try to set a password not following the policy rules.
- Try to create a game with less than 3 weight dates.
- Try to enter a weight not on a schedule day.
- Try to upload a file that is not a picture at the weight and payment pages.

7.2 Test-to-Pass

- Create a user.
- Log in and log out.
- Create a game.
- Create a second user to apply to the created game.
- Accept the application using the first user, the game leader.
- Using the second user, enter a weight on the scheduled day, and upload the scale picture.
- Using the second user, enter a payment and upload the receipt picture.
- Logged in as group leader, edit the weight and payment from the second user.
- Logged in as group leader, enter a new weight and a new payment for the second user.
- Logged in as admin, enter and edit the inputs from the previous users.
- Logged in as the standard users, check the reports content.
- Send a message from one user, and check the message logged in as other user.
- Enter a weight below the weight goal, and check if an automatic congratulation message is sent.

- Do not enter a weight on a scheduled date, and check if a penalty fee is applied.
- Enter a weight that is higher than the minimum weight, and check if a penalty is applied.
- Set a vacation period, and check if a penalty fee is not applied when the weight is not entered on those scheduled dates.

8. Deliverables Timeline

The table 1, below, presents the main project deliverables in a timeline. The week 0 period represents the 2021 work period semester, and depicts the activities planned to be done prior to the final semester.

TABLE 2 - DELIVERABLES TIMELINE

Week / Date		Task
0	Spring / Summer	<ul style="list-style-type: none"> • Learn Microsoft Azure and how to deploy a project with similar technology stack. • Practice Microsoft tutorials about .NET authentication, and SQL Server integration. • Create the backend project: ASP.NET Core Web API, the models, and controllers. • Create the SQL Server database. • Create the frontend project: Angular framework. • Create both repositories at GitHub, frontend and backend, and setup the IDEs. • Develop the frontend UIs based on the mockups.
1	Sep 7 – Sep 11	<ul style="list-style-type: none"> • Complete the APIs for CRUD operations. • Test the backend APIs using Postman and xUnit.
2	Sep 12 – Sep 18	<ul style="list-style-type: none"> • Develop the authentication process at the backend. • Implement the client-side log in and log out process using AuthGuard.
3	Sep 19 – Sep 25	<ul style="list-style-type: none"> • Test log in and log out process using Selenium
4	Sep 26 – Oct 2	<ul style="list-style-type: none"> • Deploy the code to Azure.
5	Oct 3 – Oct 9	<ul style="list-style-type: none"> • Implement the frontend HTTP calls as a service to be injected in the components that will consume them.
6	Oct 10 – Oct 16	<ul style="list-style-type: none"> • Implement the HTTP calls from the Angular components as an injected service. • Test the application using Selenium framework.
7	Oct 17 – Oct 23	<ul style="list-style-type: none"> • Implement the file handling for weigh and payment inputs.
8	Oct 24 – Oct 30	<ul style="list-style-type: none"> • Implement the discussion forum using SignalR library.
9	Oct 31 – Nov 6	<ul style="list-style-type: none"> • Execute tests and prepare a list of bugs and improvements.
10	Nov 7 – Nov 13	<ul style="list-style-type: none"> • Fix bugs and implement the improvements.
11	Nov 14 – Nov 20	<ul style="list-style-type: none"> • Launch the alpha version for end-user test.
12	Nov 21 – Nov 27	<ul style="list-style-type: none"> • Final tweaks, based on the end-user feedback.
13	Nov 28 – Dec 3	<ul style="list-style-type: none"> • Wrap up the project and prepare the final report: code, video presentation, and final report.

Annex – Photo Gallery

	Metas	inicial	01/jun	02/jun	15/jun	22/jun	29/jun	06/jul
Ana	66,8	65	70,9	68,6	67,5	W0	Recesso	Recesso
Angela	60,3	60	64,7	60,9	62,2	60,9	60,2	60,4
Carlos	99,0	90	101,2	97,1	99,6	99,4	99,9	99,6
Carol		80	90,7	84,8	84,6	84,0	83,6	83,4
Catia		66,5	71,8	69,9	69,7	69,9	W0	69,5
Claudia	62,1	60,9	63,3	W0	62,8	63,0	W0	63,7
Eliane	64,9	62	65,8	67,4	65,0	64,6	Recesso	Recesso
Haydee	62,8	60	66,2	64,5	62,3	62,7	Recesso	Recesso
Jaqueline	86,7	80	92,3	Recesso	Recesso	Recesso	Recesso	Recesso
Jorge	112,8	103	113,8	W0	W0	W0	115,6	W0
Liz		63,6	67,6	63,3	63,0	63,6	62,1	62,8
Monica	75,1	68	79	W0	W0	78,0	W0	W0
Patricia		70	80,6	78,9	79,5	80,2	82,4	80,9
Raissa	72,1	65	75,7	W0	72,0	71,7	71,3	W0
Telma	99,5	90	100,6	100,5	100,2	100,0	Recesso	Recesso
Tiago		89	99	83,7	81,6	81,6	82,6	81,7

FIGURE 27 - PARTIAL REPORT OF 2018 PARTICIPANTS' WEIGHT.

Ana: 40,00; 18/mi: 50,00
Angela: 30,00; 25/mi: 40,00
Carlos: 20,00; 18/mi: 25/mi: 40,00
Carol: 10,00
Catia: 40,00; 18/mi: 50,00
Claudia: 40,00; 18/mi: 25/mi: 60,00
Eliane: 60,00; 18/mi: 25/mi: 80,00
Haydee: 20,00; 18/mi: 25/mi: 40,00
Jaqueline: 10,00
Jorge: 30,00; 18/mi: 25/mi: 50,00
Liz: X
Monica: 60,00; 18/mi: 25/mi: 80,00
Patricia: 60,00; 18/mi: 25/mi: 80,00
Raissa: 30,00
Telma: 60,00; 18/mi: 25/mi: 80,00
Tiago: X

FIGURE 28 - PARTIAL REPORT OF 2018 PARTICIPANTS' PAYMENT.

	Nome	Meta	Inicial	Mínimo	28-Feb	Multas
1	Ana Maria	63.8	68.8	66.6	66.6	
2	Ângela	60.0	64.0	63.2	WO	10.0
3	Carlos	90.0	111.2	108.8	108.8	
4	Carol	72.0	76.9	75.9	Férias	
5	Cátia	69.0	72.7	72.2	72.2	10.0
6	Consuelo	75.0	83.1	82.2	82.2	20.0
7	Edna	65.0	76.4	73.9	73.9	
8	Eliane	60.0	63.9	63.3	WO	20.0
9	Janaina	60.0	74.2	73.2	73.6	10.0
10	Jaqueline	80.0	92.6	91.3	91.3	
11	Jorge	105.0	115.0	113.8	WO	30.0
12	Luciana	70.0	75.4	73.3	76.3	20.0
13	Marcus	103.0	129.6	124.7	125.7	10.0
14	Maria José Choairy	65.0	68.6	67.4	67.4	
15	Maria José Teles	65.0	70.8	69.1	69.1	
16	Mônica	68.0	77.1	76.5	76.5	10.0
17	Patrícia	70.0	83.8	82.0	82.0	
18	Raissa	65.0	77.7	76.6	76.6	
19	Sílvia	64.0	67.6	67.1	67.1	
20	Telma	80.0	85.8	85.1	85.1	10.0
21	Tiago	78.0	86.2	84.9	84.9	
22	Ticianá	75.0	81.2	78.5	78.5	

FIGURE 29 - PARTIAL REPORT OF 2020 PARTICIPANTS' WEIGHT.



FIGURE 30 - SCALE PICTURE SENT TO REGISTER THE WEIGHT.

	Nome	Meta	Inicial		28 Fevereiro		
					Peso	Perda kg	Perda %
1	Ticiana	75.0	81.2	78.5	78.5	2.7	3.3%
2	Edna	65.0	76.4	73.9	73.9	2.5	3.3%
3	Ana Maria	63.8	68.8	66.6	66.6	2.2	3.2%
4	Marcus	103.0	129.6	124.7	125.7	3.9	3.0%
5	Maria José Teles	65.0	70.8	69.1	69.1	1.7	2.4%
6	Carlos	90.0	111.2	108.8	108.8	2.4	2.2%
7	Patrícia	70.0	83.8	82.0	82.0	1.8	2.1%
8	Maria José Choairy	65.0	68.6	67.4	67.4	1.2	1.7%
9	Tiago	78.0	86.2	84.9	84.9	1.3	1.5%
10	Raissa	65.0	77.7	76.6	76.6	1.1	1.4%
11	Jaqueline	80.0	92.6	91.3	91.3	1.3	1.4%
12	Consuelo	75.0	83.1	82.2	82.2	0.9	1.1%
13	Telma	80.0	85.8	85.1	85.1	0.7	0.8%
14	Janaina	60.0	74.2	73.2	73.6	0.6	0.8%
15	Mônica	68.0	77.1	76.5	76.5	0.6	0.8%
16	Silvia	64.0	67.6	67.1	67.1	0.5	0.7%
17	Cátia	69.0	72.7	72.2	72.2	0.5	0.7%
18	Luciana	70.0	75.4	73.3	76.3	-0.9	-1.2%
19	Ângela	60.0	64.0	63.2			
20	Carol	72.0	76.9	75.9			
21	Elíane	60.0	63.9	63.3			
22	Jorge	105.0	115.0	113.8			

FIGURE 31 - RANKING OF 2020 PARTICIPANTS WEIGHT LOSS.



FIGURE 32 - SCREENSHOT OF THE WHATSAPP GROUP.



FIGURE 33 - PIGGY BANK WITH THE WINNER PRIZE.