SE 315 SOFTWARE PROJECT MANAGEMENT

C-BER HEALTH

Software Development Plan

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3. Functionalities
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1. INTRODUCTION

People do not pay attention to what they consume because of today's conditions. Health is the most important thing in the world. Everyone has to control it consciously. That's why we handled this project.

The product's functions are calculating the calories, BMI and ideal weight. According these informations, the program makes an appropriate diet list to user. Users will use the application on the smartphone platform.

In the beginning we implemented all the lines of codes on the Java language then we suit codes to the Android Studio.

2. OBJECTIVES

- To make users available to see what they consumed.
- To adjust frequency of consumption.
- To guide a person according to his/her BMI.
- To advice them about where they can eat/drink the things that they want to eat/drink about.
- To calculate the estimated calories burned according to the their activity.

3. FUNCTIONALITIES

Application should get information from users which are about users length, weight, age, blood type and name. Then, it guides the person by users BMI. Thirdly, application gets information from users about the water which are taken. Also, cigarettes which are smoked counts. Lastly, there will be advices to users about where they can eat or drink.

Besides the functional requirements, there are some nonfunctional requirements too. Most importantly, values should be valid format and user should update his/her personal information regularly.

3.1 REQUIREMENTS

REQ. #	FUNCTIONAL REQUIREMENTS	PRIORITY
1	Application should get information from users which is about users length, weight, age, blood type and name.	1
2	Application should adjust frequency of consumption according to datas which are added.	3
3	Application should guide the person as reported by users BMI.	2
4	Application should ask how much time the user spend for activities.	4
5	Application should calculate the calories which are taken.	5
6	Application should calculate calories which are burned from the activities according to time which is entered.	6
7	Application should advice users about what they can eat.	7

8	Application should get information from users about the water which are taken.	9
9	Application should count cigarettes which are smoked and promiles which are taken.	10
10	Application should advise users about there they can eat or drink.	8

REQ. #	NON-FUNCTIONAL REQUIREMENTS	PRIORITY
1	Values should be valid format.	1
2	Users should check notifications regularly.	3
3	Users should adapt the advices from application.	7
4	Any type of outcomes of application can have some differences.	10
5	If users have any type of diseases they should ask about it to their doctors.	9
6	If the food which is entered by user is not available on the application the user should enter a similar food.	8
7	The application should be used by users who are in an appropriate range of age.	5
8	The application shouldn’t be used by objectives except that offered objectives by application.	2
9	The user should avoid redundancy about data which are supposed to enter.	6
10	The user should update his/her personal informations regularly.	4

4. STAKEHOLDERS

C-BER Health application can be used by any person who is in 18-65 years old. It also can be used by any occupation such as doctors, dieticians, students, housewifes etc...

STAKEHOLDER	DESCRIPTION
PATIENTS	Anyone who has diseases and who wants to control their health.
DIETITIAN	Dietitians can offer this application to their patients to see their result about what did the patient eat or drink.
ADULT PEOPLE	Any adult people who want to manager their life routine can use the application.
TEENAGERS	Teenagers who want to study healthy and grown carefully can get some profits from the application.
ADDICTED	All the smoke or alcohol addictions can get some supports from application to quit their addictions.

5. SOFTWARE PROCESS

NEED #	NECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS
1	Every requirements of the system to be developed are captured in very first phase and documented in a requirement specification document.
2	The system design helps in specifying hardware, database and system requirements and helps defining the hole system architecture.
3	Each unit is developed and tested for its functionality, which is referred to as unit testing.

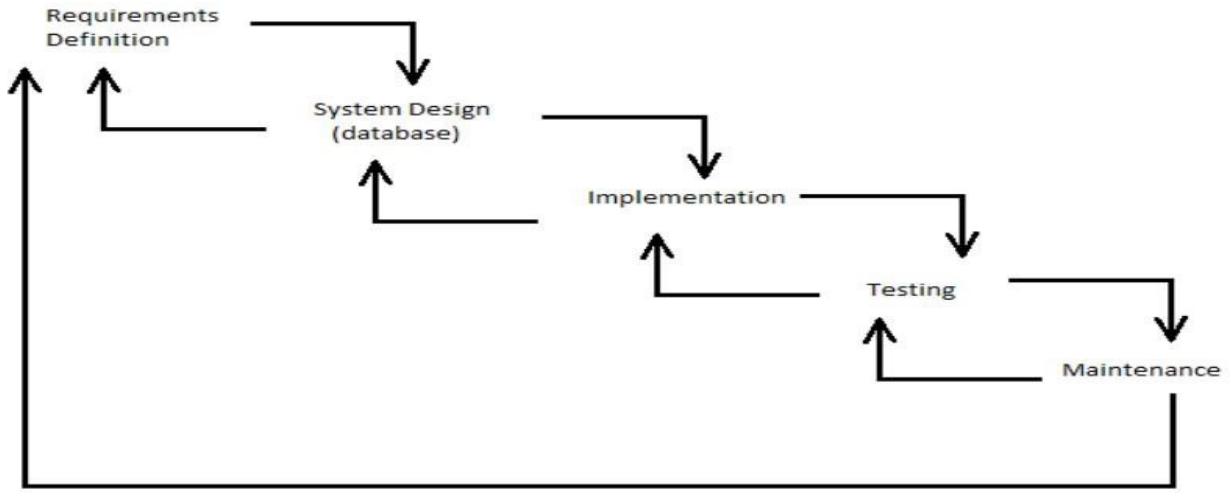
4	Post the integration the entire system is tested for any bugs and failures.
5	Maintenance is all improvements to make the system alive and to make system better with patches are released.

Software Process Name: The Waterfall Model

Software Process Description:

The waterfall model was the first process model to be introduced. It is also refers to as a life cycle model. It is very easy to understand and use. In a waterfall model, each phase must be completed phase by phase unless waterfall model wouldn't be durable. The waterfall model is the earliest SDLC approach that was used for software development. Because SDLC model to be used widely in software engineering to ensure success of the project.

Software Process Model:



Reasons to Choose This Model:

In the beginning, when we started to project, we should have know the requirement definition. So if we decide to requirement and defined project, we can finish to project easily and succeedly. When we completed the requirements definition, the system and database design becomes durable. After we designed the system we forwarded to implementation phase. According to our system design we implemented the code and then we proceeded the testing phase we tested the program individually.

When the testing finished, the last phase of the model which is maintenance remains. After we deliver the project, we will maintain the project regularly so the waterfall model ended. In benefits of the waterfall model, we proceed safely and we have always knew what the done, also thanks the waterfall model, we can redo and redefine some phases behind.

In conclusion we are glad to choose this model because choosing this model helping a lot.

6. PROJECT STAFFING

Project Manager:

Every person in our project manage the project weekly. When she/he manages the project, she/he some responsibilities which are about scheduling and managing the team members.

Requirement Engineer:

Canan and Erşen will be responsible about requirements, which are about identifying the stakeholder, analyzing and documenting the software requirements.

Coder:

Berkin and Ramazan will be responsible about implementation, which is about exactly in documentation.

Presenter:

Erşen will be responsible about presenting our project, presenting the project as much important as other staffs.

Designer:

Canan will be responsible about creating the interface.

7. PROJECT RISKS

We created the program according to the same information which we got from a health book named “Can Boğazdan Gelir” while we were synchronize the informations like calories, we might miss write them and we may miss direct the user because of our mistake.

RISK ANALYSIS			
HOOD RANK	IMPACT RANK	COMBINED RANK	RISK DESCRIPTION
2	1	3	Training: Unless coders are familiar with selected tools, the training time might be require to get faster with progress.
1	2	3	Database Complexity: Database Complexity could become more difficult than what we expected to do.
5	3	8	Testing: We have to test every stage of the process. When errors occurred we must handle these errors.
3	4	7	Requirement Volatility: Requirements can be changed during the development process when from users suggested.
4	5	9	Tools: All the new tools and IDEs should be adapted to the team members.

8.SOFTWARE NEEDS

Android Studio: We need to integrate this application to the program.

Intellij Idea: We need to use it for implementation and compiling.

Adobe PS: We need to prepare the pictures which are we use in the program.

9. HARDWARE NEEDS

Computer: A computer which has powerful hardware with qualified computer parts such as keyboards, monitors etc...

Smart Phone: We need to use a smartphone because we test the program on it.

10. MEASUREMENTS

Effort and Schedule: Time spending for each group member is a measurement for our project.

Lines of Code: This reflects development progress and productivity. It also predicts future development.

Defect Count: This indicates how well the system is implemented and how effective the testing process is.

Number of Changes: It monitors changes carefully.

11. SOFTWARE TOOLS

1.Tool /Functionality Data Cost/Training

Tool	Intellij Idea	Eclipse	NetBeans	Notepad++
Cost	149$	250$	299$	FREE
Training Days	7	21	49	7
Functionality	80	40	80	20

Normalized Cost/Training/Functionality Data

Tool	Intellij Idea	Eclipse	NetBeans	Notepad++
Cost	49.8	83.6	**100**	0
Training Days	14.2	42.8	**100**	14.2
Functionality	100	50	**100**	25

Normalized Tool Graph

Which tool has been selected? Why?

We have selected Intellij Idea because it is the first IDE that we learned. We are used to this IDE a lot. We
know almost everything about this IDE. That's the most important reason why we chose this IDE.

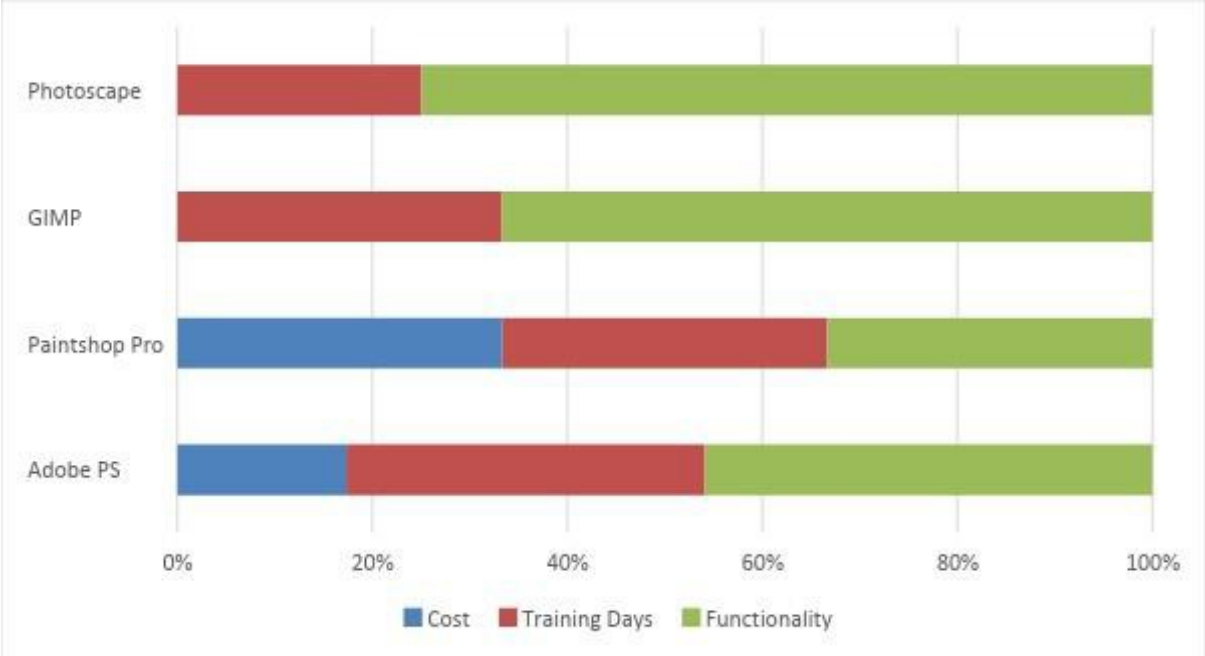
2.Tool /Functionality Data Cost/Training

Tool	Adobe PS	PaintShop Pro	GIMP	Photoscape
Cost	249$	790$	FREE	FREE
Training Days	20	30	10	5
Functionality	75	90	60	45

Normalized Cost/Training/Functionality Data

Tool	Adobe PS	PaintShop Pro	GIMP	Photoscape
Cost	31.5	**100**	0	0
Training Days	66.7	**100**	33.3	16.7
Functionality	83.3	**100**	66.7	50

Normalized Tool Graph



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We have selected Adobe PS because it is one of the most useful program to create or design images, graphs, advertisements… We are not professional but we need functional program which is like Adobe PS. Moreover, Adobe PS is qualified for us. We can use it all over our lives.

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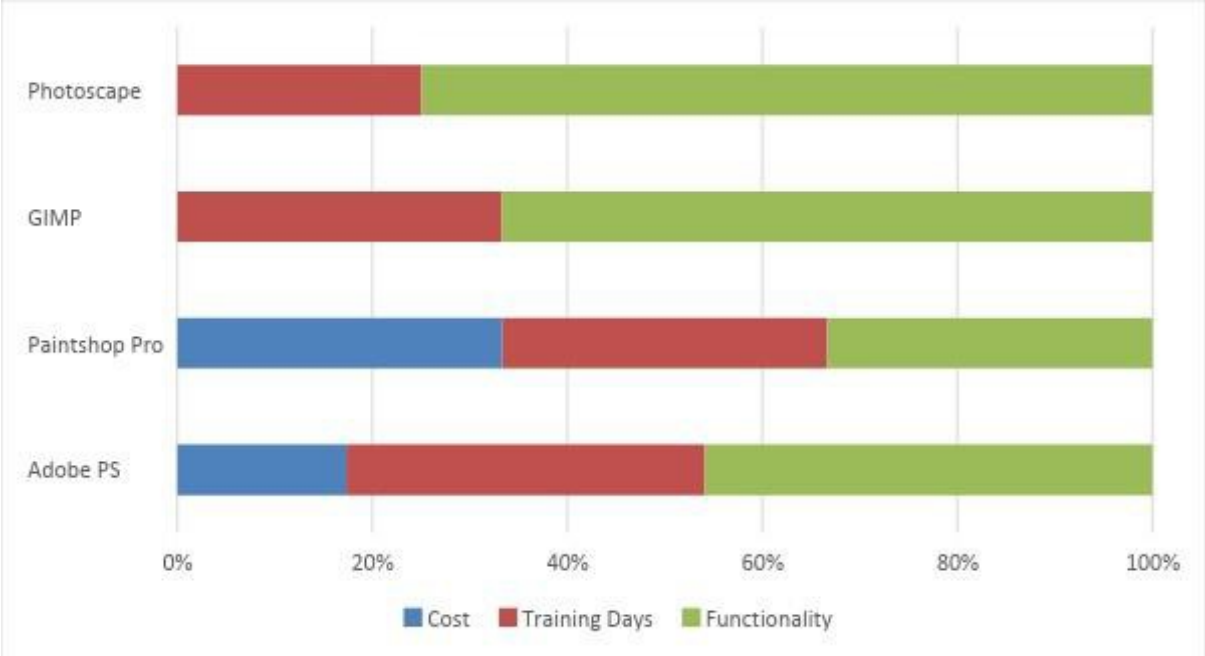

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12.PROJECT SCHEDULE

Task Names:

a) Starting the project(1 day)

b) Defining the requirements(14 days)

c) Determining the process model(7days)

d) Tool Selection(7 days)

e) Risk Analysis(14 days)

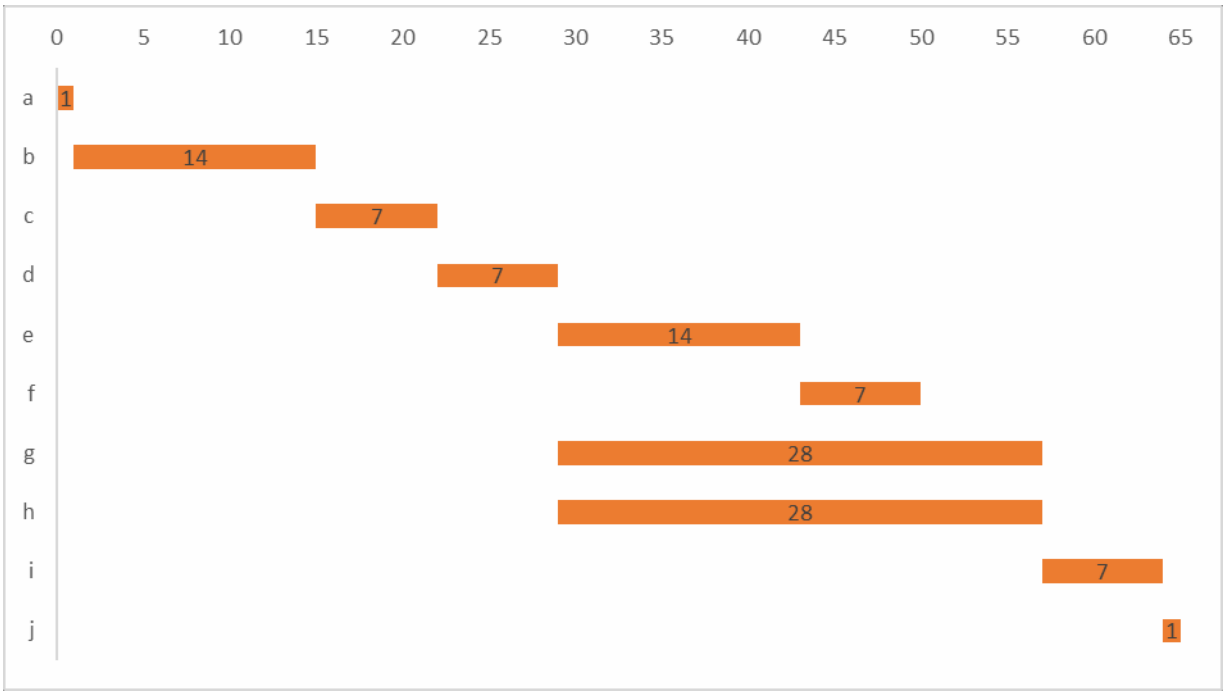
f) SPO(7 days)

g) Design(28 days)

h) Implementation(28 days)

i) Testing(7 days)

j) Finishing the project(1 day)

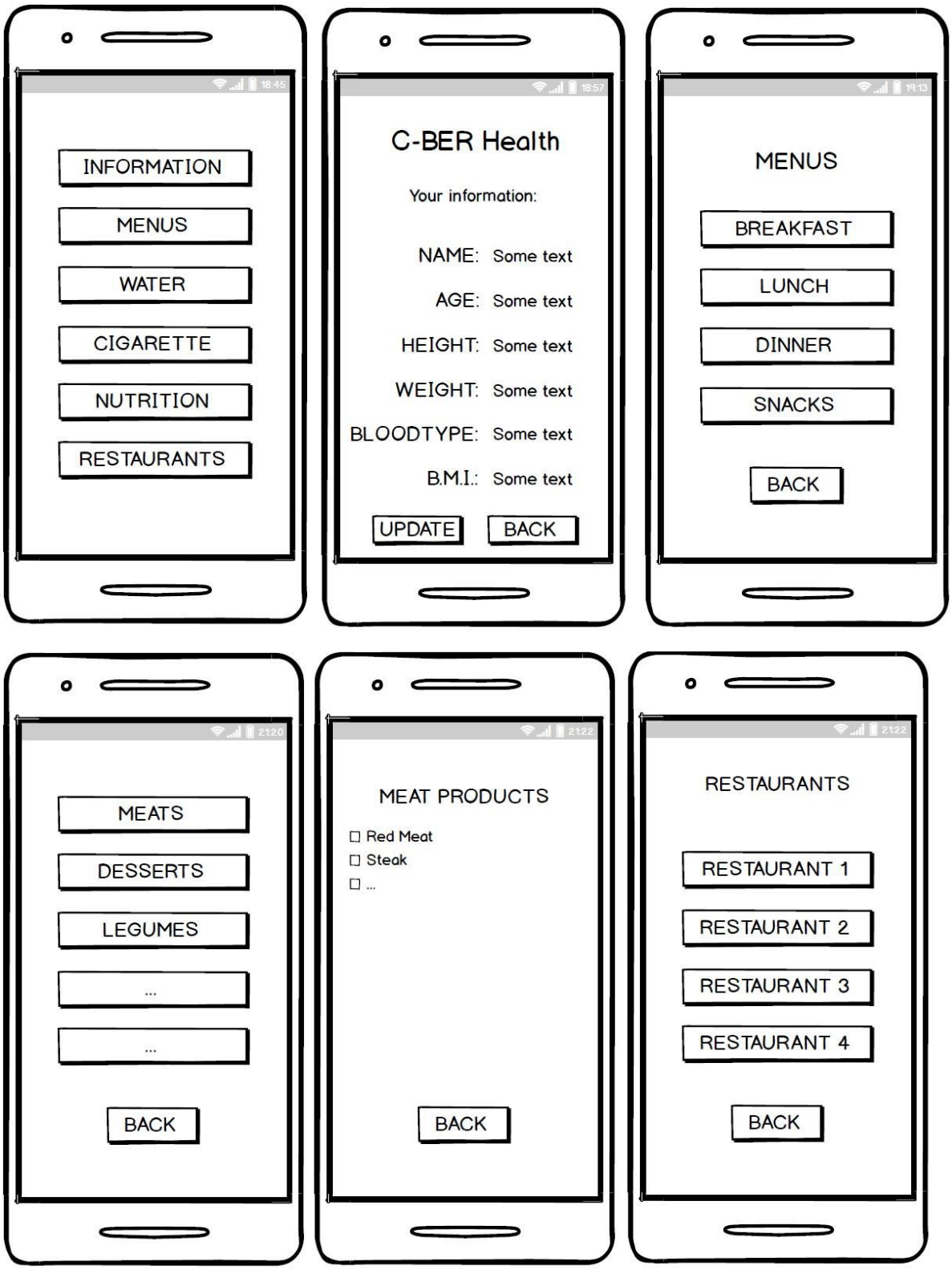


13.PROJECT PAYOFFS

If users will use the application correctly and regularly, they can get benefit exactly like how they wanted so.

- Users can lose/gain weight.
- Users can discover new restaurants.
- Users can quit smoke and alcohol.

14. USER INTERFACE


INFORMATION
MENUS
WATER
CIGARETTE
NUTRITION
RESTAURANTS
C-BER Health
Your information:
NAME: Some text
AGE: Some text
HEIGHT: Some text
WEIGHT: Some text
BLOODTYPE: Some text
B.M.I.: Some text
UPDATE
BACK
MENUS
BREAKFAST
LUNCH
DINNER
SNACKS
BACK
MEATS
DESSERTS
LEGUMES
...
...
BACK
MEAT PRODUCTS
☐ Red Meat
☐ Steak
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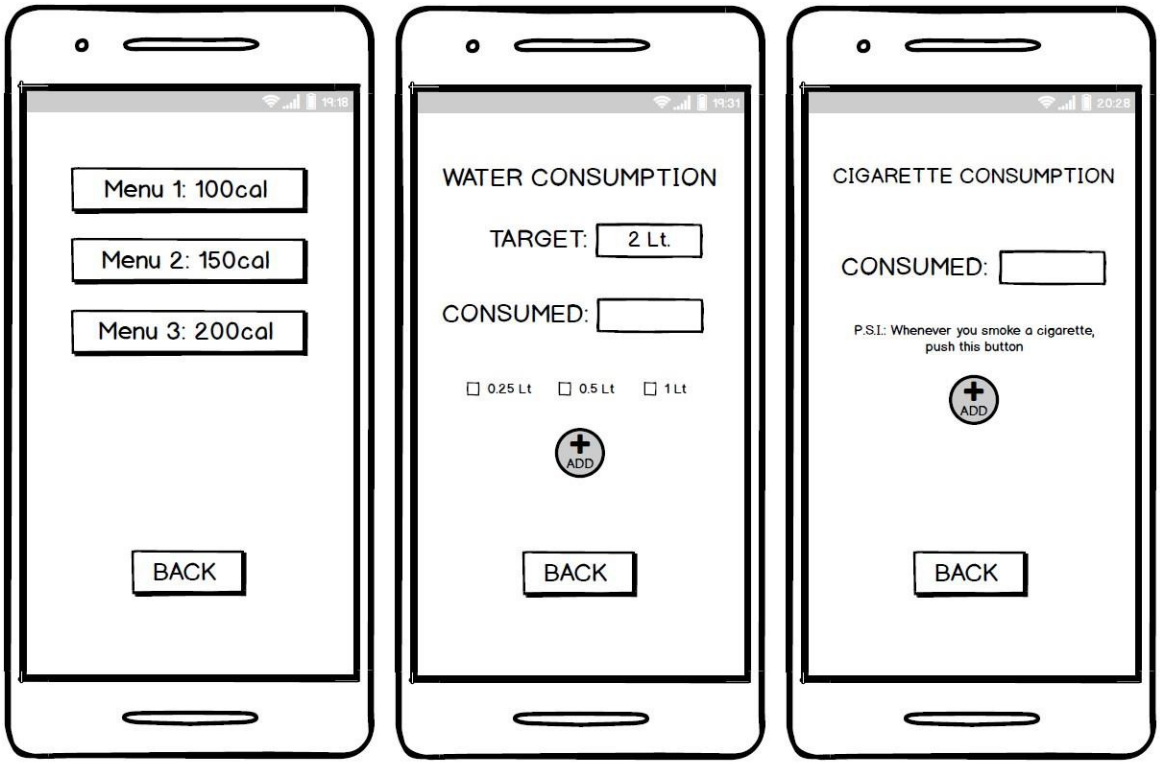
BACK
RESTAURANTS
RESTAURANT 1
RESTAURANT 2
RESTAURANT 3
RESTAURANT 4
BACK



15. CONCLUSION

C-BER Health application is well thought and well developed program by our group members. While we were developing it, we wanted to help humanity like we mentioned before, if the application would have used carefully and regularly, we could have accomplished what we hoped and we can help all the stakeholder. This project refers to health and it will be used by certain people who wants to be healthier, if they don't need to be healthier, they wouldn't use this application in the beginning. That is why we think this project will be successful.