FEUP – Licenciatura em Engenharia Informática e de Computação

Interação Pessoa Computador – 1st Semester 22/23

Eventive

Final Report and Presentation

Class 3 - Group 3

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Part I - User and Task Analysis

1. Project's Idea Description

The focus of the project is to build a user interface for a mobile application to check and schedule extracurricular activities, which is called **Eventive**.

Its use would be personal, presenting a personalized weekly schedule for each user, based on their preferences related to various events organized by the University of Porto's community. Furthermore, the distinctive element of the project is automatic registration. The search for activities that arouse their curiosity will promote the student's integration into the university life.

Regarding this, the group aims to develop an indispensable platform that allows users to consult their schedule and at the same time reconcile their academic responsibilities with their personal interests and thus make the most of their time.

2. Related Apps/Services

When talking about calendarization and time management in this context, it’s imperative to mention the functionalities brought by the calendar and the notes app, as well as Uni, which are the ones that are most like **Eventive**.

As we know, the calendar app not only lets you check the days of the month but allows you to take notes and create reminders. In our opinion, these features aren’t visible enough to the user, making their reach more limited.

Regarding the note app, we recognize its utility, but only when it's used with caution. Otherwise, its content can become very unorganized and confusing, leading the user to be overwhelmed and lose information.

Whereas the Uni App it’s more limited and grants you access to your schedule and the dates of exams, it will not support adding more events to the agenda.

3. Questionnaire Highlights

The questionnaire that was realized regarding the Eventive project received 24 answers. Everyone that answered was FEUP students between the age of 18 and 21. In particular, were received 16 male answers and 8 female answers.

Most students either had an interest or had some interest in participating in extracurricular activities, receiving information about them from different sources, such as email, social networks, or even through friends. However, almost one-third answered that the way that the events are informed is not viable.

To analyze the respondents' passions, we asked for a grade from 1, as "not interested", to 5, as "really interested", to evaluate the significance of different topics and to understand what is more enthusiastic for students nowadays. It was perceived that the more amusing activities were sports, music, and parties, while the least engaging were arts, seminars, and esports.

As revealed by the questionnaire, more than 95% of the students would like to organize their schedules according to their extracurriculars.

Regarding desirable tasks, the respondent notably had their preferences such as organizing their schedule according to their life, checking deadlines and locations for activities, adding events corresponding to their preferences, and having a to-do list. While travel time and the repeating of events were not so engaging.

4. Answers to 11 Questions

I. Who are the users?

- LEIC students.
- Portuguese and International students that speak mainly Portuguese or English.
- Have interest to take part in after school activities (in various areas).

II. What tasks do they perform?

Currently, students must go into many different applications to know about groups and activities, such as email, Instagram or Sigarra.

III. What tasks are desirable?

- Possibility to organize your schedule according to the activities that you want to partake in.
- Everything is in the same application (enrollment deadlines, activity locations).
- To-do list.
- Travel time.
- Repeating events.

IV. How are tasks learned?

When starting the app for the first time, users will be presented with a learning page that will function as a tutorial.

V. Where are tasks performed?

Calendar-like application that allows you to add your course agenda, activities, or events.

VI. What is the relationship between user and information?

The user will provide their UP-login information, to sync the schedule. While scheduling events, they will also be able to share the location of the event and other information.

VII. What other instruments does the user have?

Some of the related apps are Calendar, Notes, and Uni. In the calendar, users can schedule events. The first two apps allow the creation of to-do lists and with Uni you can check your exams and weekly schedule.

VIII. How do users communicate?

Although users don’t communicate with each other, they can share events with other users.

IX. How often tasks are performed?

- Adding events or schedule in the calendar (very frequent)
- Search for extracurricular activities (frequent)

X. Are there time restrictions?

Since the app is meant to be used for organizing academic life (school and after-school activities), the user might spend more or less time

using the app, depending on if the user has an easier time getting organized or not.

XI. What happens if something goes wrong?

The app must have an error page and a text box where the user can relay the problem to the developers.

5. Personas

Gisele Martins

Artistic

Perfectionist

Overachiever

Biography:

Age: 18
Education level: High school
Work/Occupation: Full time student at FEUP
Family: 2 younger brothers and her parents
Location: Lives in a university residence in Porto, but she's from Viseu
Technological proficiency: Above average
Preferred devices: Mobile phone/laptop
Archetype: the 'organized friend'

Narrative/Lifestyle/Behavioral Patterns:

Being the eldest of 3 kids, Gisele always got used to having her schedule organized, since she took care of her brothers, while her parents were at work. She is now a freshman and since she doesn't have to take care of her brothers, she has plenty of time to spend on extracurricular activities, related to either music or arts. To keep herself organized, she likes to keep her phone quite clean, without apps that can easily distract her from classes or her study time.

Objectives/Needs:

- Being able to choose which activities interest her, saving time in searching for each of them.
- She'd like to receive notifications in case an activity she is interested in is getting scheduled.
- Having a to-do list to write important things during class.

Frustrations/Pain points:

- She is getting upset and tired of wasting time to go through different apps informing her of different activities.
- Having to go to various platforms to know about activities in the university community instead of having everything in the same application.

João Costa

Biography:

Age: 19
Education level: High school
Work/Occupation: Full time student at FEUP
Family: Both parents and a sister
Location: Lives in an apartment with 3 friends in Porto and is from Aveiro
Technological proficiency: Average
Preferred devices: Mobile phone
Archetype: the 'party animal'

Active

Outgoing

Extrovert

Narrative/Lifestyle/Behavioral Patterns:

Making it to the basketball team this year will occupy a lot of time in João's schedule. Even though he likes to party with his friends and doesn't have to worry about his parents' lectures, he can't fall behind in his classes or his training routine. João isn't an organized person, he likes to live now, but since he is now in his second year, with so many things to do, he is giving it a try.

Objectives/Needs:

- Organize his schedule according to the extracurricular activities he participates in.

Frustrations/Pain points:

- Doesn't like to spend a lot of time arranging his schedule, needing something that can be done in a few clicks.
- Not the most organized person but feels like this year that is going to be necessary since he now has basketball practice.

Pedro Machado

Biography:

Age: 20
Education level: High school
Work/Occupation: Full time student at FEUP, part time job on the weekends
Family: Mother
Location: Porto
Technological proficiency: Above Average
Preferred devices: Mobile phone/laptop
Archetype: the ‘caregiver’

Sensible

Empathetic

Responsible

Narrative/Lifestyle/Behavioral Patterns:

Pedro has always been a great student and a hard worker regarding his academics. He is a member of the informatics club and likes to participate in every workshop/seminar that he can. He works a part-time job on the weekends, which makes him need of organizing his studying time and still needs time to finish his work. Even though he lives with his mother, he still takes at least 45 minutes to commute to college.

Objectives/Needs:

- Needs to add his traveling time to his schedule to make sure he doesn't get late.
- Effective way of knowing all deadlines to sign up for workshops/seminars.

Frustrations/Pain points:

- Frustrated by the way the events are currently advertised.

6. Activity Scenarios

Gisele Martins

Gisele just installed ***Eventive*** to quickly learn about extracurricular activities. After **authenticating**, she chooses her interests, and the events corresponding to those choices are automatically added to her calendar. She decides to add her class schedule as well. To do this, Gisele adds the classes as events, in which she then adds the classroom, teacher, class number, and any notes she finds important.

João Costa

João is a second-year student who just joined the basketball team. He likes to party a lot and hang out with his friends which makes him lose focus on his studies sometimes and now that his schedule is busier with basketball practices and tournaments, he wants to keep his schedule on track and be a bit more responsible. João talked to some of his team members, and they advised him to use ***Eventive***. On the app, he scheduled his classes and practices and a few hours a day to study with friends killing two birds with one stone. He also appoints FEUP CAFFÉ'S parties although he probably wouldn't forget about them.

Pedro Machado

Pedro is a third-year student at university who is a member of the informatics club and works a part-time job during the weekends. He has been using ***Eventive*** for a couple of years now and every time he has a club meeting, he sets an alarm to make sure he isn't late, and during the meetings, he takes notes on his weekly planner of the tasks he must get done before the next one. He thinks it's practical how he can open the app and be aware of his schedule and see how much free time he has left.

7. Conceptual Model

7.1. Objects (attributes)

event(name, local, date, reminder, todolist, notes**)**

person(name, interests**)**

user(name, email, password**)**

interests(name, events**)**

todolist(name, tasks**)**

task(description, priority, date, reminder**)**

7.2. Actions

create, edit, remove, share event;

choose, edit, remove interests;

add, edit, remove tasks (todolist).

7.3. Relations

A **person** is a **user**;

A **user** has **interests**;

A **user** adds **events**;

A **user** adds a **todolist**;

An **interest** has **events**;

A **todolist** has **tasks**.

8. Functionality and tasks

8.1. Functionalities

- The user will be able to select interests when first launching the app, which will indicate what events will be recommended
- Users can add events or edit the automatically added events (interest-related)
- To-do list to keep tasks and their deadlines on the calendar

8.2. Tasks

- Create a to-do list attached to your event
- Visualize the deadline of an event
- Check a task as completed on the to-do list
- See the weekly schedule
- Add an event
- Share an event
- Add a deadline for your to-do list
- Set an alarm
- Select the activities of interest

9. Usability Requirements

The amount of time the user will need to spend on the app to plan their agenda will be short and accomplished with a few clicks. In addition to spending less time doing tasks, the users won't have the necessity to go to other apps to organize their agenda. Overall, the app will be user-friendly, simple, and intuitive, creating a pleasant user experience.

9.1. Add an event

- **Efficacy:** All users completed the task, and made no errors
- **Efficiency:** Under 15 seconds, all made less than 5 clicks
- **Satisfaction:** 95% of users were satisfied and liked our solution

9.2. Select the activities of interest

- **Efficacy:** 100% of the users completed the task, and made no more than 3 errors
- **Efficiency:** Under 45 seconds, 85% of users made less than 8 clicks
- **Satisfaction:** 90% of users liked our solution

9.3. Share an event

- **Efficacy:** All users completed the task, and made no errors
- **Efficiency:** Under 25 seconds, all made less than 5 clicks
- **Satisfaction:** 95% of users were satisfied and liked our solution

10. Conclusions

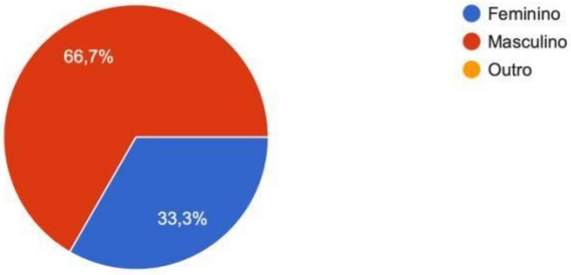
According to the questionnaire, and even though it's in an early stage, it was perceived that the project that the group is working on will be well received among the FEUP students.

Overall, the group intends to create a platform where users can go beyond their university life and enjoy it to its fullest while keeping themselves organized and up to date on their work.

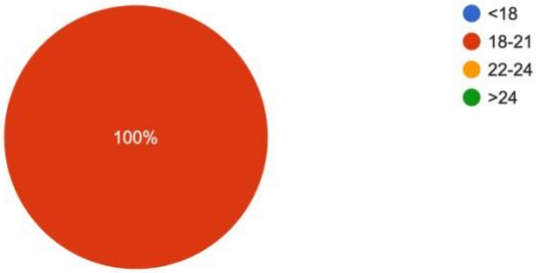
11. Annexes

11.1. Forms

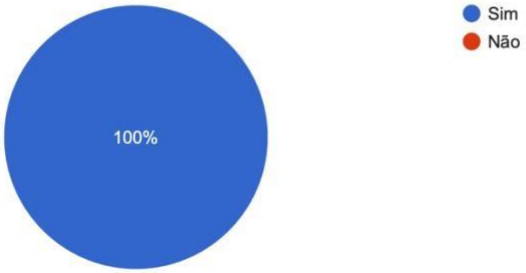
Género
24 respostas



Idade
24 respostas

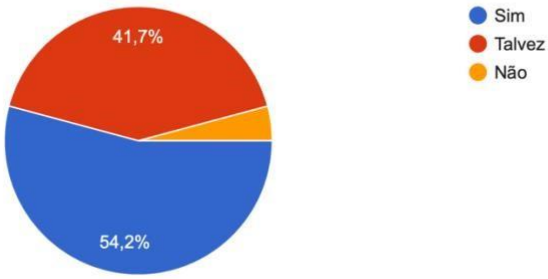


És estudante na FEUP?
24 respostas



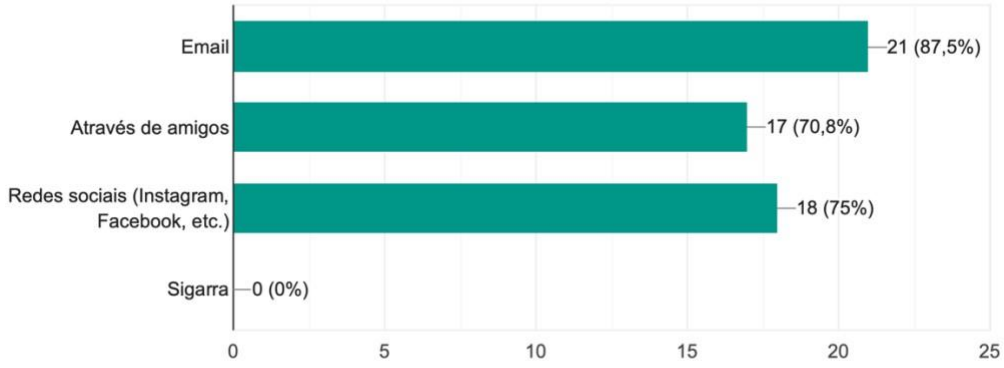
Tens algum interesse em participar em atividades extracurriculares?

24 respostas



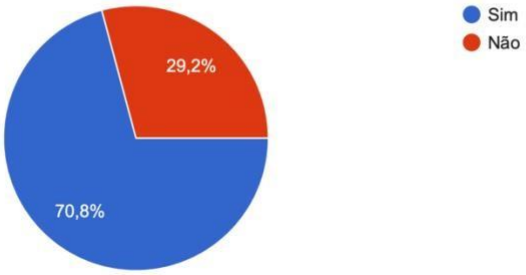
Até agora, como é que tens tomado conhecimento da sua existência?

24 respostas

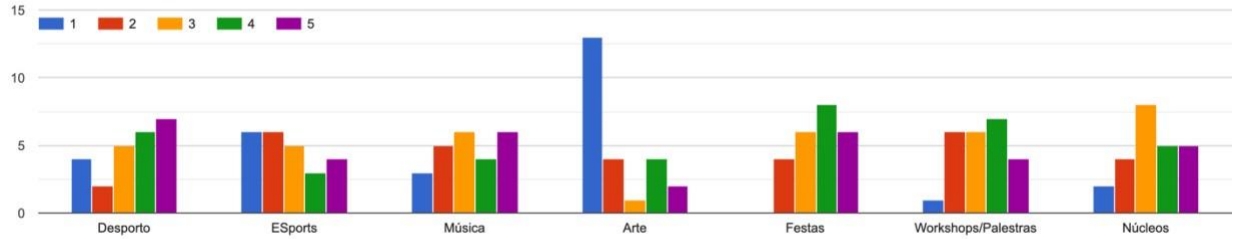


A forma como tomas conhecimento dos eventos é viável?

24 respostas

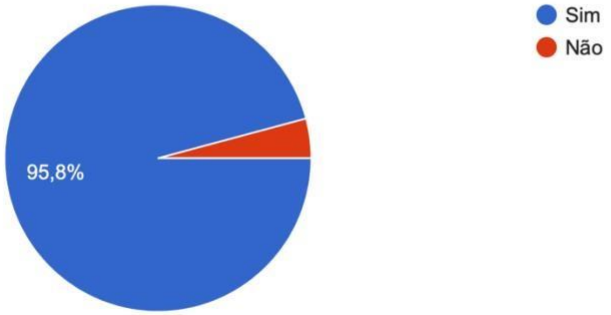


Quais é que são os teus interesses?

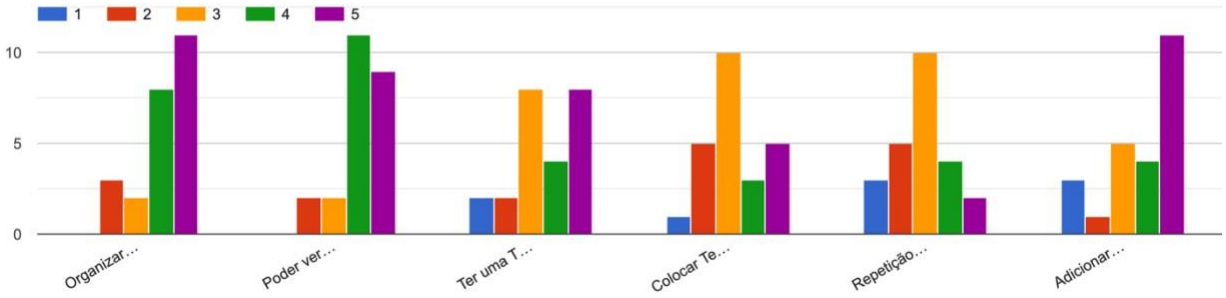


Tens interesse em organizar o teu horário de acordo com as atividades em que participas?

24 respostas



Quais tarefas são mais interessantes?



Part II – First Prototype and Heuristic Evaluation

1. Project Description

The focus of the project is to build a user interface for a mobile application to check and schedule extracurricular activities, called **Eventive**. It would feature a personalized weekly schedule, the product differential element being the automatic registration, based on the user's preferences, of events organized by the FEUP community. Given this, the group aims to develop an indispensable platform that allows users to consult their schedule and, at the same time, reconcile their academic responsibilities with their personal interests and thus make the most of their time.

At the moment, the project has these main functionalities:

- Access to the app’s settings
- Create, edit, and delete events
- Create, edit, and delete notes
- Create, edit, and delete alarms
- Select interests
- Add recommended events
- Share and recommend events

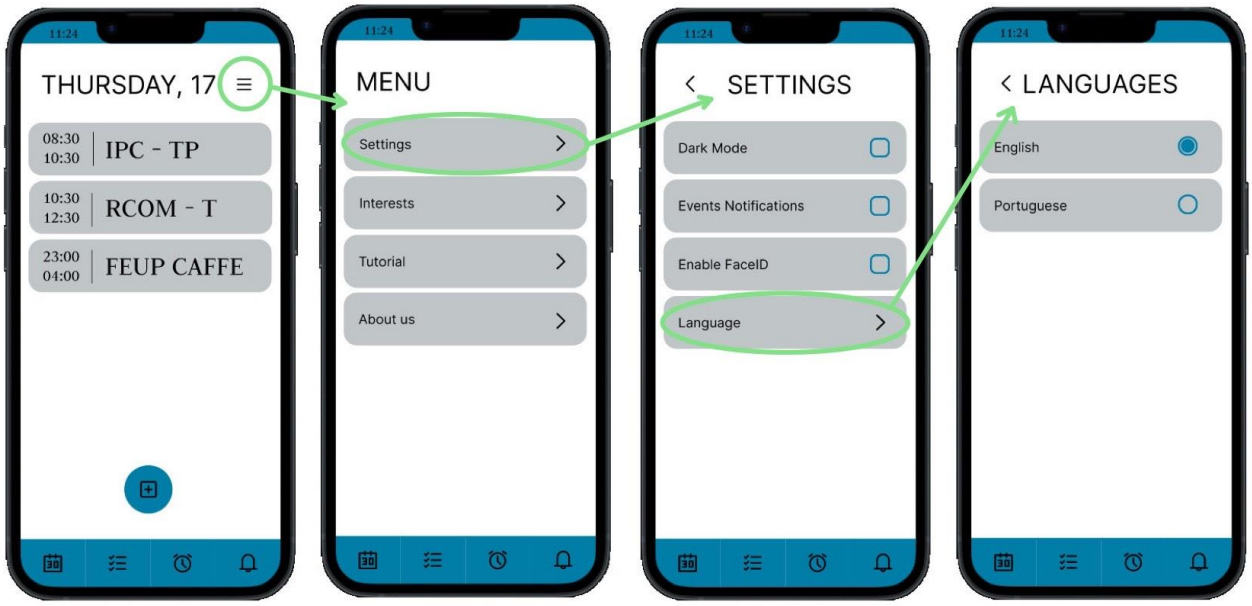
In terms of tasks, we propose the following:

- Visualize the deadline of an event
- Check a task as completed on the to-do list
- See the weekly schedule
- Add a deadline for your to-do list
- Set an alarm

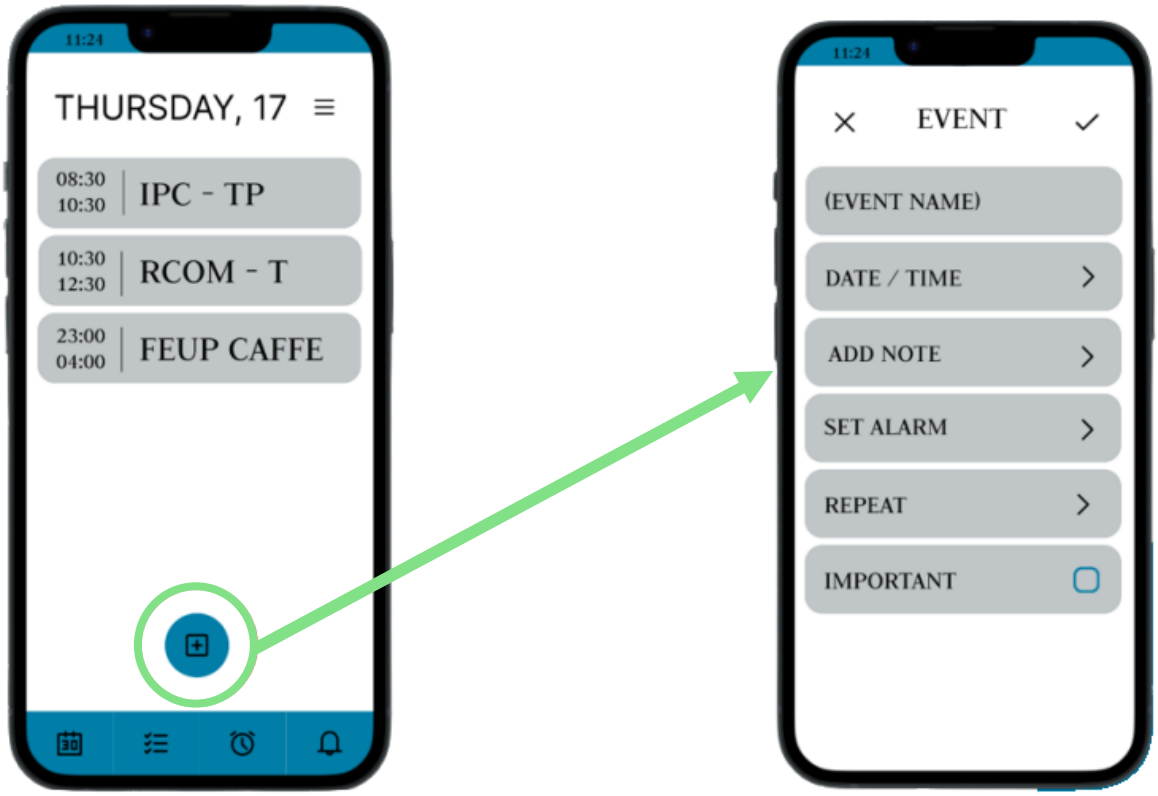
2. Prototype's Wireflow

2.1. Loading page, tutorial flow and main page

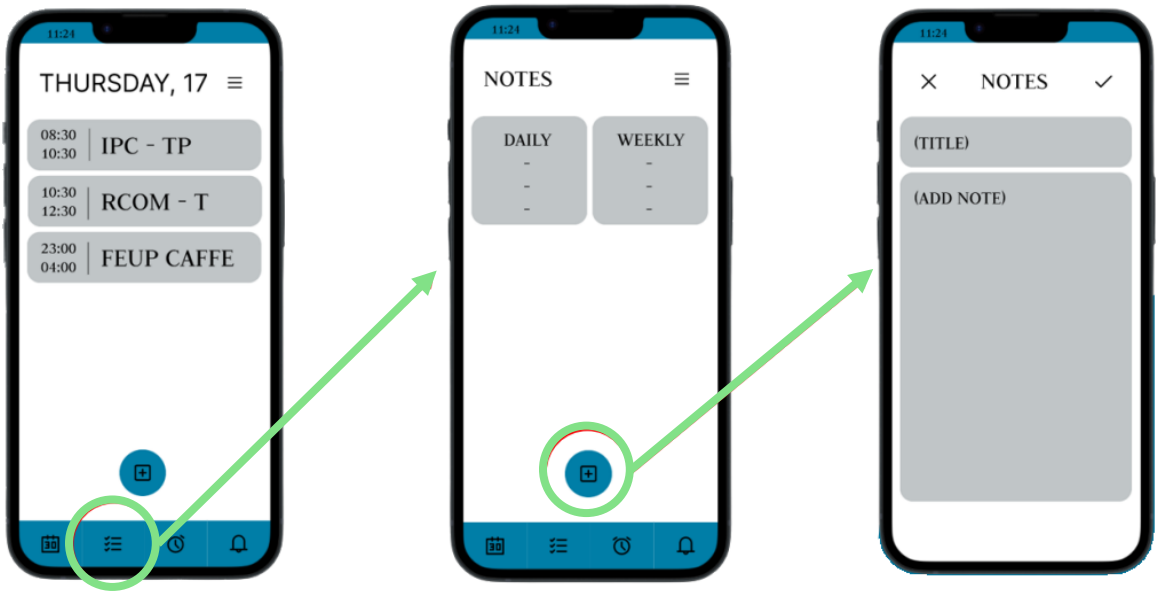
2.2. Access to settings and language change



2.3. Create Events



2.4. Create Notes



2.5. Update Interests

[Our Prototype]

3. Heuristic Evaluation Results

The main problems identified on the prototype were:

1. Lack of clarity regarding some buttons' functionalities
2. Button usage was not intuitive
3. Mismatched app navigation

The average severity was 2,1.

The focus on problem 1 was returning to previous pages so we added "go back" buttons in the ones where it was necessary.

In problem 2, we made the entire button section clickable instead of only the arrow.

To solve problem 3, we simply made sure that the buttons navigate to where they were supposed to.

To manage other existing problems, we encourage users to read the tutorial we provided.

4. Corrections to perform in Phase 3

For the next phase, we propose fixing the issues found in the heuristic evaluations such as a backspace button that was missing on most pages and some confusion about the menu button.

Even though it was pointed out that by double tapping the calendar icon the user could switch between the daily calendar and the monthly calendar, it’s not considered a high priority, since the main goal is for the user to check its daily events

In terms of missing functionalities, the following are highlight:

- Check the deadline of an event.
- Add a login page.
- Manage past and deleted events.

5. Conclusions

Prototyping is an iterative process, in which it’s important to go back and rethink some features of the project that don’t correspond to the way they were intended. The application of heuristic evaluation allows for getting a new perspective on some of the features that were not working.

In conclusion, the next phase is intended to have a more optimized version of the project.

6. Project Description

6.1. Heuristic Evaluation Report made by group 4

HCI Winter Semester 2022 - 2023

Heuristic Evaluation Report

Group evaluated: 03 - Eventive
Evaluated by group: 04

Problem #	Issue (include screenshot)	Heuristic(s)	Severity (1-4)
1	No tutorial não dava para voltar para trás	4	3
2	Nos menus o ícone do botão para andar para trás não era intuitivo	10	2
3	Quando acedemos ao ringtone éramos direcionado para o sítio errado	4	4

6.2. Heuristic Evaluation Report made by group 6

HCI Winter Semester 2022 - 2023

Heuristic Evaluation Report

Group evaluated: 3 - eventive
Evaluated by group: 06

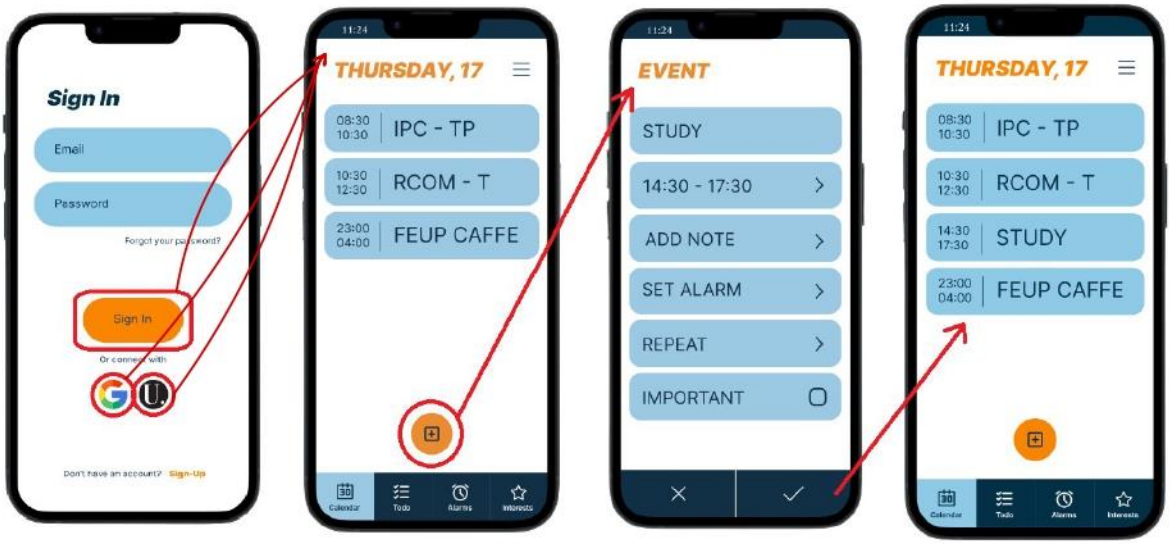
Problem #	Issue (include screenshot)	Heuristic(s)	Severity (1-4) lowest-1 Highest-4
1	When in main menu, the ≡ button has no functionality.	4	1
2	Only after watching the tutorial, is it clear that the ≡ button means going back to the main menu throughout the app.	3/6	2
3	In main menu, the options/buttons look like they should be clickable, but only the arrows are.	8	1
4	When done selecting interests, the app goes to the daily schedule instead of the main menu, like after performing other tasks.	4	1
5	Unclear that you can tap calendar twice to see the monthly calendar, information present in the tutorial only. Tapping twice to go to another functionality is only available in this page.	6/4	3

Part III – First Prototype and Heuristic Evaluation

1. Prototype's Wireflow

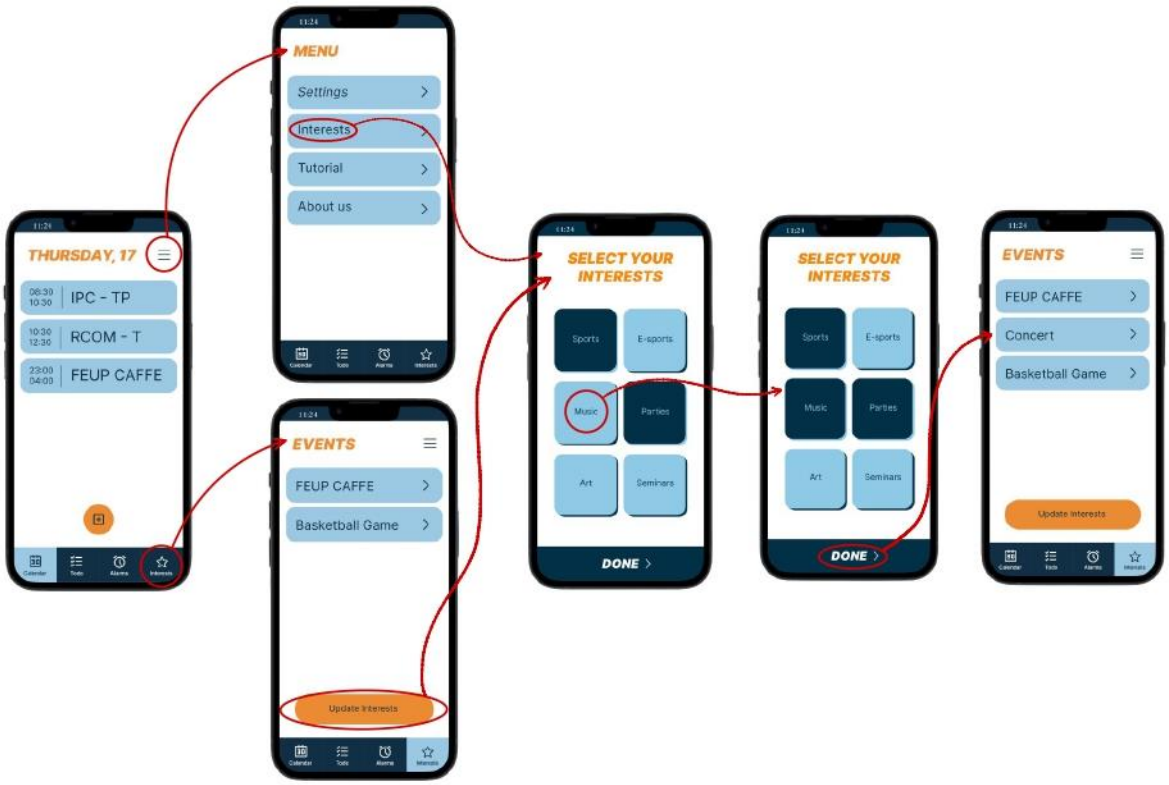
Besides a few adjustments that we made, we added a description for the buttons on the Navigation bar.

1.1. Create Events



1.2. Update Interests

1.3. Share Events



2. User Evaluation Protocol

2.1. Objectives

User evaluations were conducted to measure the actual state of the prototype. Those assessments can identify its strengths and weaknesses, which are of use when it comes to improve the quality between the application and its users.

	Average duration (s)	Number of clicks
Task 1	10 s	3 clicks
Task 2	30 s	12 clicks
Task 3	15 s	5 clicks

Table 1 - Objectives for each task

2.2. Users

The prototype was presented to 23 different people, who were friends or people known by the group developing the project. The participants must be students between the ages of 18 and 25 years old.

2.3. Method

The evaluation contained three phases. Initially, the participants resolve the tasks provided. After completing the tasks, the participant is asked some questions regarding their age, gender, and current occupation.

Some questions follow concerning the experience while experimenting with the prototype. Usability and features satisfaction were one of the focuses on the questions. Although, it was important to interrogate the participant regarding the use of instructions, since it was included in the

prototype and their thoughts about them. To sum up, it was relevant asking about any other opinion they would like to express about the prototype.

2.4. Tasks

The tasks chosen to realize the evaluative session were the following:

- Create a new event called "Study" on the 17th of November 2022 at 14:30

  Regarding this task, the user had to login or register the application. After completing the login, the user was redirected to the main page, containing the events for 17th of November 2022, and had to press the plus button, to create a new event. While creating the event, the user had to change the event's name to "Study" and alter the hours set to 14:30. By pressing the check button, the event was created, and the task completed.

- Select Music as one of your interests

  The task started on the main page, the calendar containing the date and its respective events. The participant could choose between two different paths.

  The first path was simply clicking the Interests button on the navigation bar and was redirected to the Interests page. While in the Interests page, the user had to click the "Update Interests" button and was redirected to a page containing its interests and had to choose Music followed by the Done button. The task is now finished in the Interests page with a music event added.

  The second path consists of pressing the Menu, the hamburger button, the user is presented with a section called Interests and by pressing it, is redirected to a page containing its interests. Choosing Music and clicking the Done button, the task was completed.

- Share the event FEUP CAFFE with Maria Eduarda

The task starts on the main page, by pressing the event “FEUP CAFFE”, the user was redirected to a page containing the event details. Pressing the share button, redirects the user to a page containing all his contacts, checking Maria Eduarda, and selecting the task as done, will finish the task. music event added.

Another way of completing the task is to press the Interests button in the navigation bar, redirecting to the Interests page, the event “FEUP CAFFE” is one of the options and select it. It will show the event details needing to press the share button and picking Maria Eduarda to share the event with and select the button done. The task is now completed.

2.5. Measures

During the resolution of the tasks, were collected quantitative and qualitative data. The quantitative data consists of average duration, the number of clicks, and the misclick rate per task, and the qualitative information involves the difficulty of using the app and functionality satisfaction.

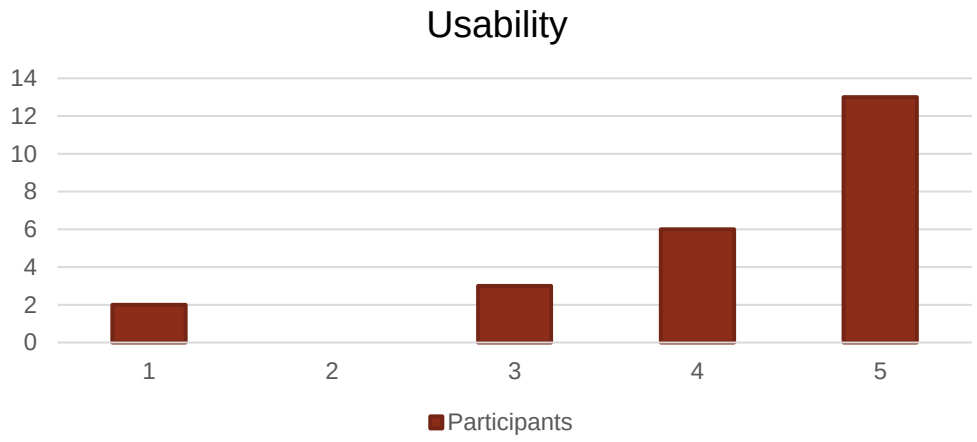
	Average duration (s)	**Number of clicks**	**Misclick rate (%)**
Task 1	42,69 s	9,55 clicks	57.1%
Task 2	13,17 s	1,30 clicks	23.2%
Task 3	12,83 s	2,13 clicks	34.7%

Table 2 - Measures

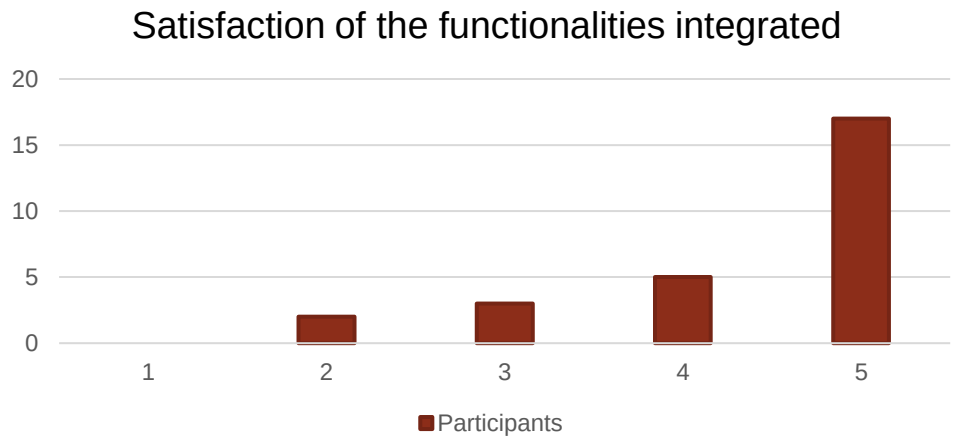
3. Results and Statistical Analysis

3.1. Qualitative data

The results of the evaluation, the qualitative data regarding the tasks realized is the following:



Graph 1 - Rate of Usability



Graph 2 - Rate of Satisfaction

Regarding usability, 1 stands for difficult and 5 for easy, while the satisfaction of the functionalities integrated is 1 for not satisfied and 5 for satisfied.

3.2. Quantitative data

	Task 1			Task 2			Task 3		
Tester	Duration (s)	Nr. Misclick	Success	Duration	Nr. Misclick	Success	Duration	Nr. Misclick	Success
1	29,5	0	Direct	8	1	Direct	7,8	2	Direct
2	28,2	6	Indirect	8,9	1	Indirect	10,4	2	Indirect
3	17,6	6	Give up	10,2	1	Direct	10,8	1	Direct
4	21,3	1	Direct	18,8	1	Indirect	13,4	2	Direct
5	44,9	1	Give-up	8,4	2	Direct	10,8	0	Give-up
6	36,1	9	Indirect	6,4	1	Direct	9,3	2	Direct
7	17,5	3	Direct	7,2	1	Direct	6,4	2	Direct
8	20,7	1	Direct	8,2	2	Direct	9,4	2	Direct
9	86,2	26	Indirect	12,6	2	Indirect	7	3	Direct
10	25,5	0	Direct	5,6	1	Direct	6,6	2	Direct
11	100,6	25	Indirect	6,1	1	Indirect	27,9	1	Direct
12	127,9	61	Indirect	10,4	1	Indirect	16,2	4	Direct
13	23,1	2	Indirect	5,5	1	Direct	5,4	1	Direct
14	16,3	2	Direct	5,6	1	Direct	16,8	2	Indirect
15	10,1	1	Give up	10,9	1	Direct	10,4	2	Direct
16	16,1	0	Direct	11,2	1	Direct	8,8	2	Direct
17	44,9	13	Indirect	8,7	1	Direct	19,8	2	Indirect
18	89,6	12	Indirect	7,2	3	Direct	16,4	3	Direct
19	28,6	1	Direct	57,6	3	Indirect	15,9	7	Indirect
20	25,2	2	Direct	10,2	1	Direct	13,7	1	Direct
21	-	-	-	54,7	1	Direct	24,5	2	Indirect
22	108,6	36	Give up	13,9	1	Indirect	9,9	1	Direct
23	20,7	2	Direct	6,5	1	Direct	17,4	3	Direct

Table 3 - Quantitative data obtained by the resolution of tasks

3.3. Statistics

Statistics regarding the first task:

	Average	Standard Deviation	Median	Confidence Intervals (95%)
Time (s)	42,70	35,07	26,85	[28,36; 57,02]
Clicks	9,54	15,13	2	[3,36; 15,73]

Table 4 - Statistic obtained after the quantitative data for the first task

The objective time and number of clicks for this task were inferior to the confidence intervals, which shows that the difficulty of the task was bigger than expected. Although, the number of clicks expected is like the inferior interval. Since it was the first task realized by the participants, it's understandable that they needed more time to adapt to the system and get comfortable with it.

Although the task was considered a bit more difficult than expected, it is understood that the participants considered the task relatively simple and intuitive, even though it does not meet the expectations predicted. It was noticed that all the users that gave up or bounced this task, were users who answered the survey on an android mobile since the mobile version to test the prototype is not the best.

Statistics regarding the second task:

	Average	Standard Deviation	Median	Confidence Intervals (95%)
Time (s)	13,17	13,92	8,7	[7,48; 18,85]
Clicks	1,30	0,63	1	[1,04; 1,56]

Table 5 - Statistics obtained after the quantitative data for the second task

In this task, the objective values for either average time or number of clicks were bigger than the obtained. The task was considered a little bit more difficult, although the results showed otherwise, since both variables were inferior to the superior confidence interval, so it shows that the task was a success and was even simpler and intuitive.

Statistics regarding the third task:

	Average	Standard Deviation	Median	Confidence Intervals (95%)
Time (s)	12,83	5,83	10,8	[10,44; 15,21]
Clicks	2,13	1,36	2	[1,58; 2,68]

Table 6 - Statistics obtained after the quantitative data for the third task

Regarding this task, the objective values were similar to the obtained values. The time expected was inferior to the superior confidence intervals but is bigger than the average time. It's taken that this task was a success since the user can do other tasks in less time after getting comfortable with the user interface.

4. Conclusions

We had a thorough and iterative approach to developing our application, which is important for ensuring that the result meets the needs and expectations of the target audience. By focusing on the functionality of the prototype and gathering feedback from potential users, we were able to create a user-friendly interface that is easy to use. This is an important factor in ensuring the success of any application, as a complex or difficult-to-use interface can lead to user frustration and abandonment.

We were able to reach a more finished and defined look for the application by the end of the third iteration. We took the time to polish and refine the design, which can help to make the application more appealing to users.

Overall, we took a well-planned and effective approach to develop our application. By gathering feedback from potential users and iteratively improving the prototype, we were able to create a user-friendly and polished application.