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# Wesnoth Companion App



An Android application based on the game “The Battle for Wesnoth” for  
Human Computer Interaction class

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# Idea

- The idea was to make an **Android application** that could complete the game experience in mobility;
- The aim of the application was to implement some aspects of the game that could be important to see when the player is far from PC;
- The development of the software was made following all the steps of Human Computer Interaction: **Needfinding, Implementation** and **Usability Test**;

# Needfinding

- Needfinding is the process of observing and questioning people to discover their **needs, goals, and values**;
- From these we can create:
  - **Personas**: fictional characters that are used to represent the demographics of users;
  - **Scenarios**: make use of specific stories to both construct and illustrate design solutions. The characters of these stories will be our personas;
  - **Requirements**: determine the what of the design: what information and capabilities our personas require to accomplish their goals.

# Needfinding - Interviews

The interviews were done in 2 ways:

- Creating a topic on the game official forum, where i asked some general questions about **why** a player would use a companion app and **how**;
- Choosing some candidates between 18~26 years, making them play the game and then asking the some questions about the **game itself**, what they would like to see in a **game application** and some general questions about **companion apps**;

# Needfinding - Personas

- Most of the candidates said that the most important informations that they would like to see are the **informations about the units** playing a specific scenario and some ways to take some **strategic notes**;
- From the interviews we can define 2 type of Personas:
  - **Marco**, 18~26 years, an hardcore gamer that spends enough time playing videogames. He goes to university and he spends a lot of time out of home. He has a good knowledge about computer science and information system;
  - **Giulio**, 20~26 years, is a casual gamers and he has a basic knowledge of computer science; He only plays videogames occasionally;

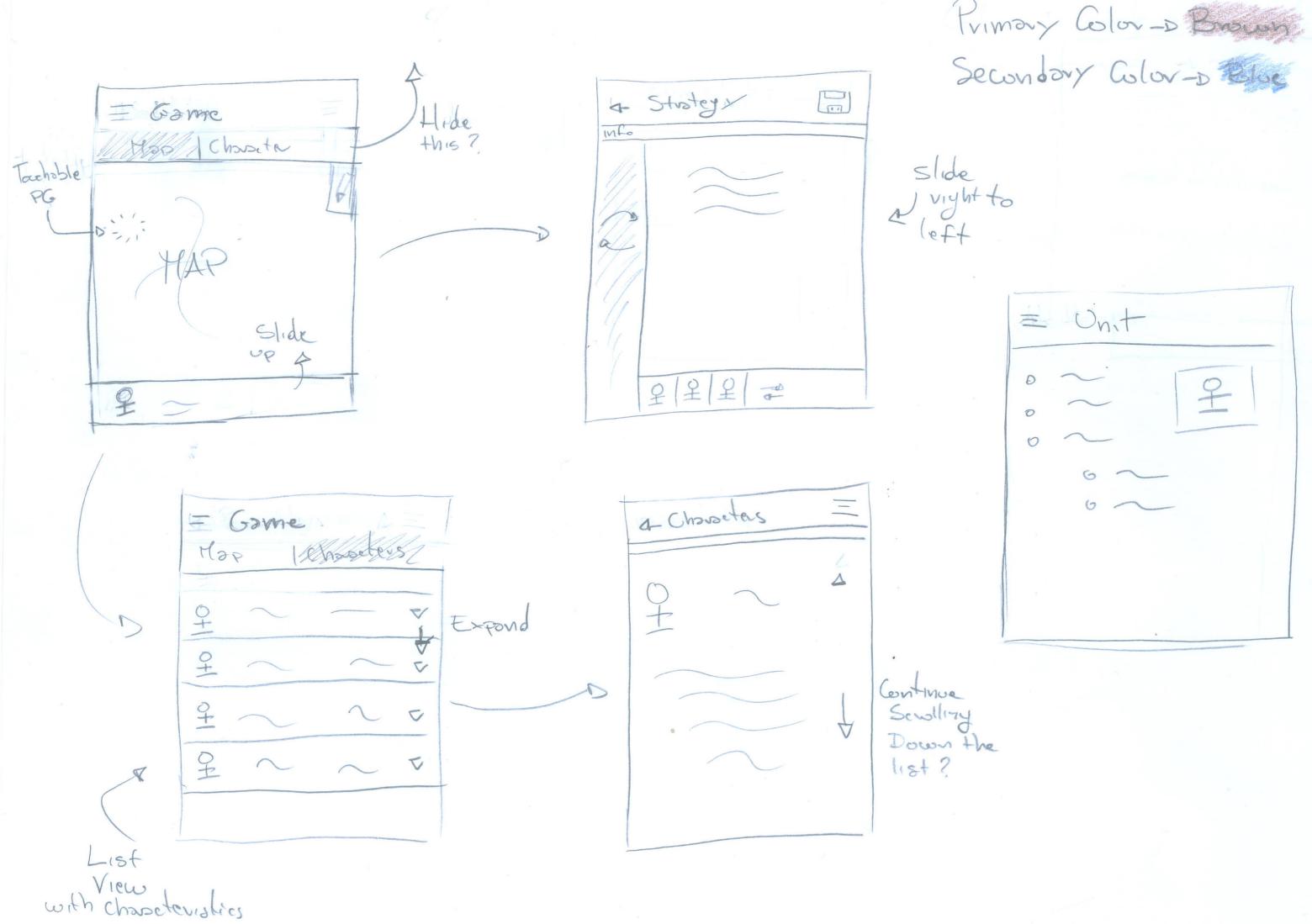
# Needfinding - Scenario

- From the personas we can define some **scenarios**, like:
- "Before going to work, Giulio always wants to play some Wesnoth, but he often leaves a match unfinished. So he would like to see if there is a possible strategy to win the game while he goes to work: he needs to be able to read the general state of the match, like the units in game, the map.. He would also like to write down some notes about his strategy so he can read them when he'll return home and play the game".

# Needfinding - Requirements

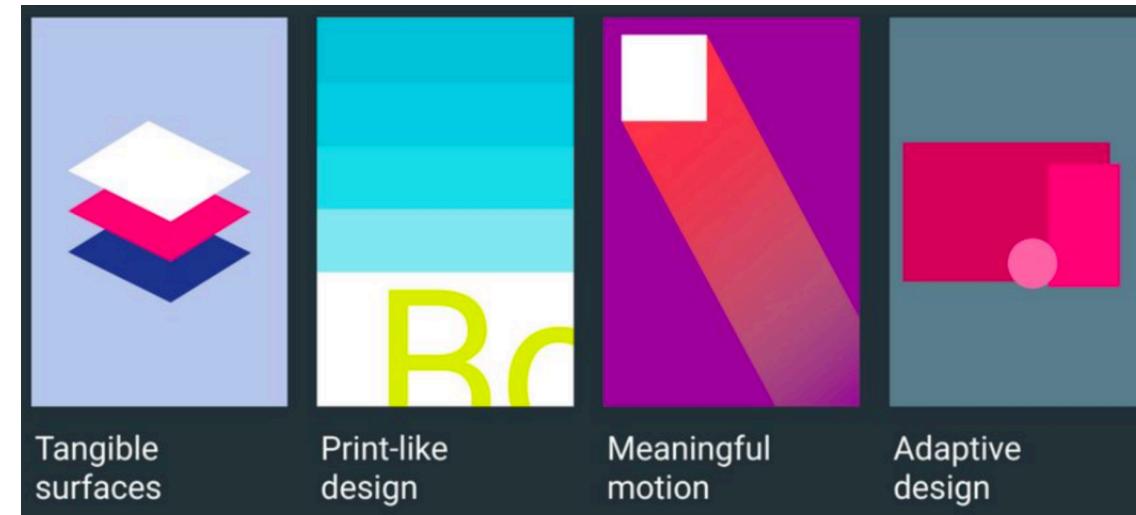
- From the scenarios, we can define the **app requirements**:
  - The app must be able to load a previous saved game;
  - The users must be able to see the current scenario: units, map, objectives ..;
  - The characters information have a great importance: the app must show all the units characteristics;
  - The users must be able to read all the detailed information about classes;
  - The app must let users write some strategic note both general and about characters: these notes can be accessed when the users will return to play the game;

# Needfinding – Mock-up

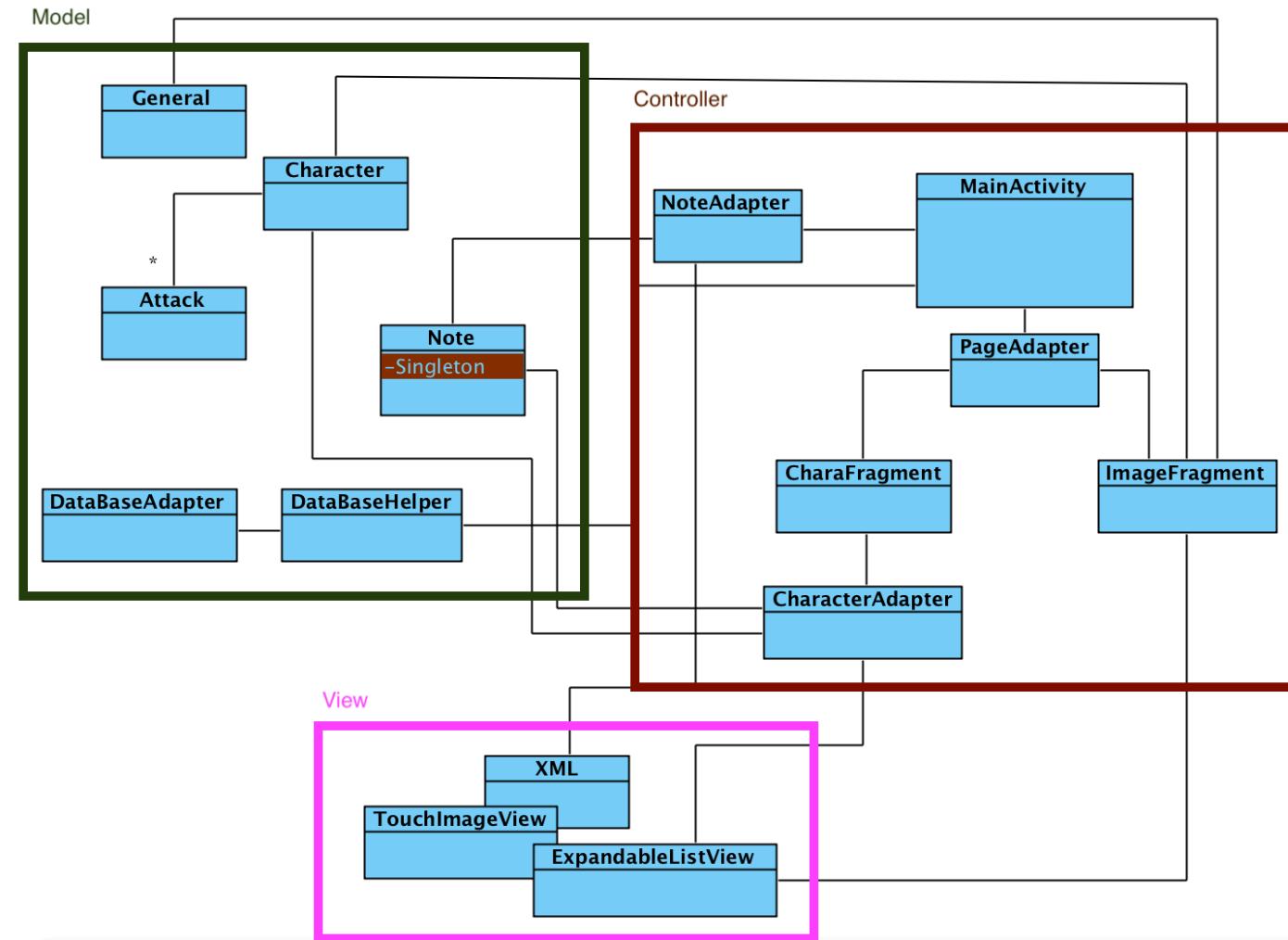


# Application

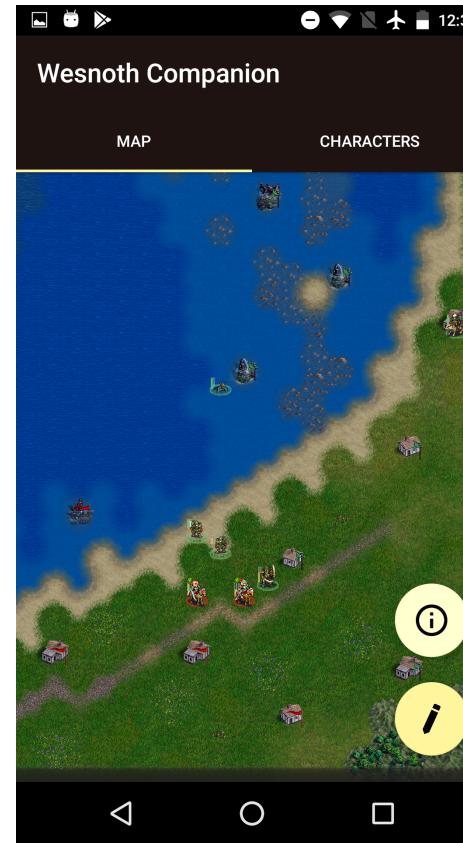
- After the needfinding phase, we can make a first **prototype** that implements all the functionalities that can satisfy the requirements;
- For the development we use the **Material Design** principles:



# Application – UML and Model View Controller



# Application – Interface and Functionalities



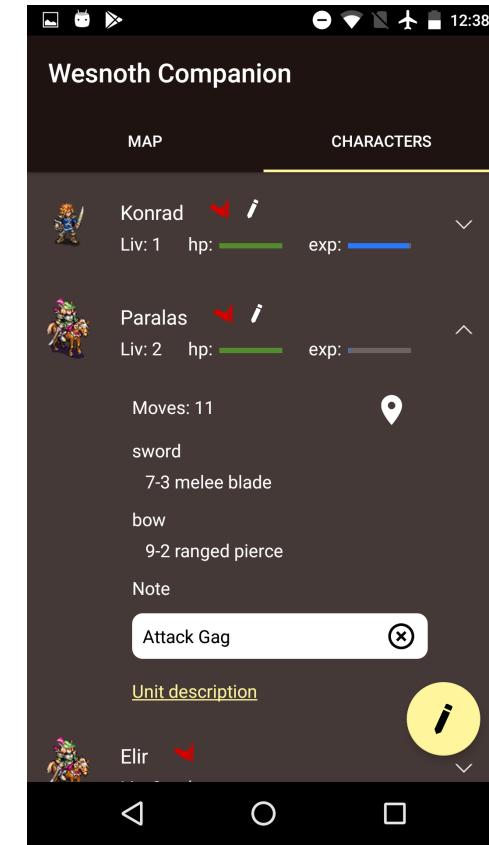
# Application – Interface and Functionalities



If we tap a character, we can access his sheet and write a note on him

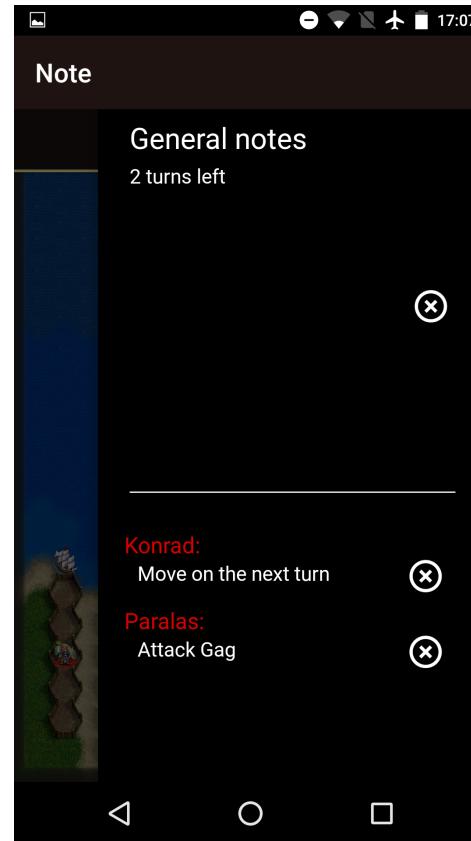


The second page where we can see the characters list

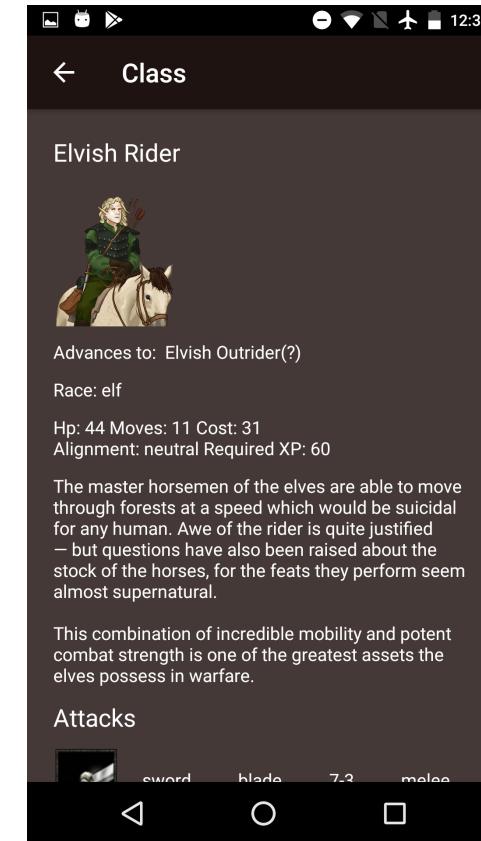


If we selected a character, we can access his sheet and write a note on him

# Application – Interface and Functionalities



With the persistent floating button we can access the note drawer



Characters activity with detailed information

# Usability Test

- The last phase is about **testing the app** to evaluate the functionality of the prototype;
- The tester are the **same persons** interviewed in the needfinding phase;
- The test was made by 2 step:
  - A first step where the tester were **free** to use the app like they wanted;
  - And a **scripted test** where the tester had to satisfy some goals;

# Usability Test - Goals

- The **goals** of the scripted test were:
  - **Goal 1:** load save 2 and navigate the map;
  - **Goal 2:** select Konrad on the map and write a note on him;
  - **Goal 3:** select the enemy Gag on the characters list and write a note on him;
  - **Goal 4:** select the ally Legorfinon, localize him on the map and write a note on him;
  - **Goal 5:** write some general note;
  - **Goal 6:** delete all the note;
- After this test, all the testers were asked to answer some **SEQ questions**;

# Usability Test – SEQ Questions

N	Questions	Average	$\sigma$
1	The app is visually pleasing and reflects the "look and feel" of the game	6.37	0.48
2	The meaning of icons and buttons is clear	6.5	0.50
3	The animations are smooth and pleasant	6.62	0.48
4	The way the buttons are positioned is wrong and illogic	1.25	0.43
5	The labels are clear and reflect what they do	6.25	0.66
6	The app shows a lot of error	1.75	0.66
7	The gestures are intuitive and natural	6.5	0.70
8	It is difficult to navigate the map	2	1.22
9	The response when a character is selected on the map is fast	6.75	0.43
10	The characters list is properly shown and teh interaction with it is pleasant	6.37	0.69
11	It is difficult to find a character in the map	1.25	0.66
12	It is easy to write a note (both general and on the characters)	6.87	0.33
13	The way how the character informations are displayed on the map is satisfying	6.37	0.69
14	The way how the scenario informations are displayed on the map is satisfying	6	0.70
15	It is difficult to delete a note	1.00	0.00
16	The units descriptions are difficult to find and read	1.87	1.26
18	The overall system is pleasing	6.5	0.5

Average time for the first phase: 3 minutes; Average time for the second phase: 2 minutes

# Usability Test - Improvements

Some testers also suggest some possible **improvements**, like:

- Adding **more information** in the characters sheets, but they could lead to a non-optimal vision of the map;
- Adding **more ways to take notes**, like drawing directly on the map, but they could go against the gesture to navigate it;
- A better way to highlight the **possible movements** of the characters;

# Conclusion

- In this project I made a companion app for “**The battle for Wesnoth**” game;
- The development followed all the **HCI steps**: needfinding, implementation and usability test;
- All the testers were **satisfied** about the app and no particular errors were found;
- The testers also gave some **suggestions** on how to improve the functionalities of the app, but overall they thought that it can already be useful in this way;