

Project Report

Battleship Game

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1. Project Team

Our team consists of two members **Lukas David** who is the team leader and **Alexander Horina** and it is called Jägermeister.

We split our project in two main parts **organization** and **coding**.

Due to the small size of our team we decided that both team members are involved in every part of the project.

Because only two people work on this project we decided that we will not need something like scheduled formal meetings. Instead we will do most of our communication with slack and only meet when there is a special reason to do so.

2. Task and time estimation

Table 1. Organization

Task	Description	Due Date	Estimated Hours
Project team	Forming project team, deciding on project leader and responsibilities	23.12.2017	1h
Time estimation	Split the project in smaller tasks and define a time estimation	14.01.2018	4h
Mockups	Designed the mockups for the project	14.01.2018	5h
Project cost calculation	Estimated costs and decided on how much money we would charge for our product	14.01.2018	2h
Write project report	Write report including all mockups, cost calculation and time estimation	14.01.2018	4h
User manual	Write a user manual provides information on how to start the game etc.	23.01.2018	2h
Time expenditure	List all activities with date and how much time we needed	23.01.2018	1h

Task	Description	Due Date	Estimated Hours
Final documentation	Creating a final documentation which includes all information about our project	23.01.2018	8h
Presentation	Prepare our final presentation	25.01.2018	4h
Total			31h

Table 2. Coding

Task	Description	Due Date	Estimated Hours
Splash screen	Implement preloader, picture appearing at the start of the game	23.01.2018	3h
Welcome screen	Worked on start screen where you can decide between new game, highscore and credits	23.01.2018	2h
Credits screen	A screen where you can see who designed the game etc.	23.01.2018	3h
New game	Implement logic behind the game, every game has a unique name and players can choose their name	23.01.2018	20h
Edit mode	Players can place their ships before the game, no overlapping should be possible	23.01.2018	10h
Multiplayer screen	Implement the actual game screen	23.01.2018	7h
High score	A highscore page where it is also possible to replay old games	23.01.2018	10h
Protobuf	Make sure game state is saved correctly and game can be loaded	23.01.2018	4h
Testing	Writing tests to ensure the game works as intended	23.01.2018	5h
Total			64h

Table 3. Total

Task	Estimated hours
Organization	31h
Coding	64h
Total	95h

As mentioned before our project is divided in two main categories organization and coding and every task is in one of these two categories. Like we can see above the coding part has with 64 hours more than twice the size as the organization part which has only 31 hours.

Combined they result in a total sum of **95 hours** which is the estimated time for our whole project.

3. Cost Calculation

For the project cost calculation we decided to charge 15€ for one working hour. So when we estimate with 95 hours the costs for our project will be **1425€**.

The price for our product will be 5€. We choose this price because we think that for a simple battleship game you can't charge that much, because it isn't a game that is very unique or new, because there are already so many battleship games around.

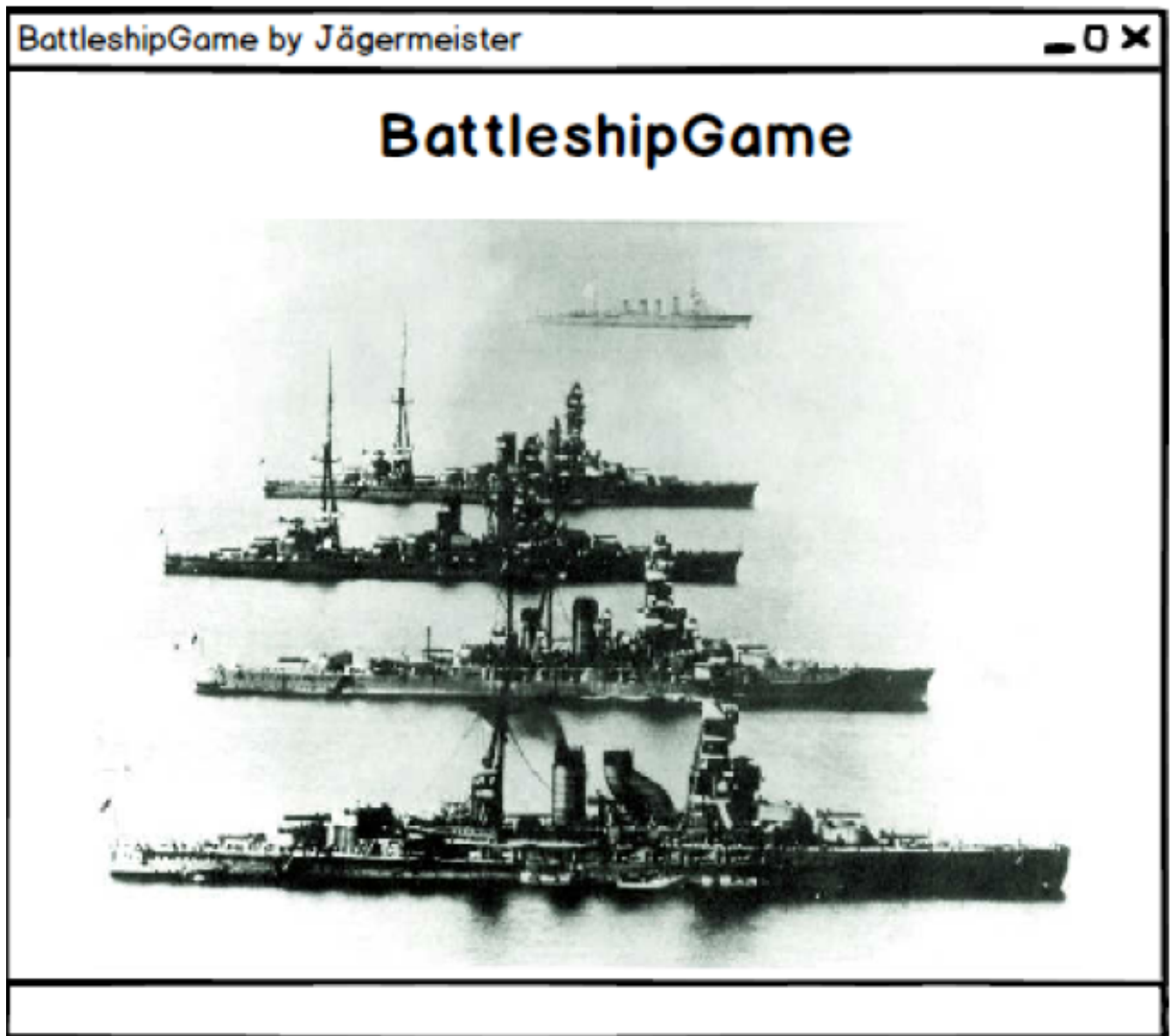
$$1425/5 = 285$$

So 285 games will be the breakeven point for our project. This means we need to sell 285 games to cover the costs of the project and for every game we sell after the first 285 games we will make a profit.

4. Mockups

All our mockups are designed with Balsamiq Mockups 3. We kept them in black and white because we wanted to focus on the functionality of our game first and afterwards we will design a pretty looking GUI.

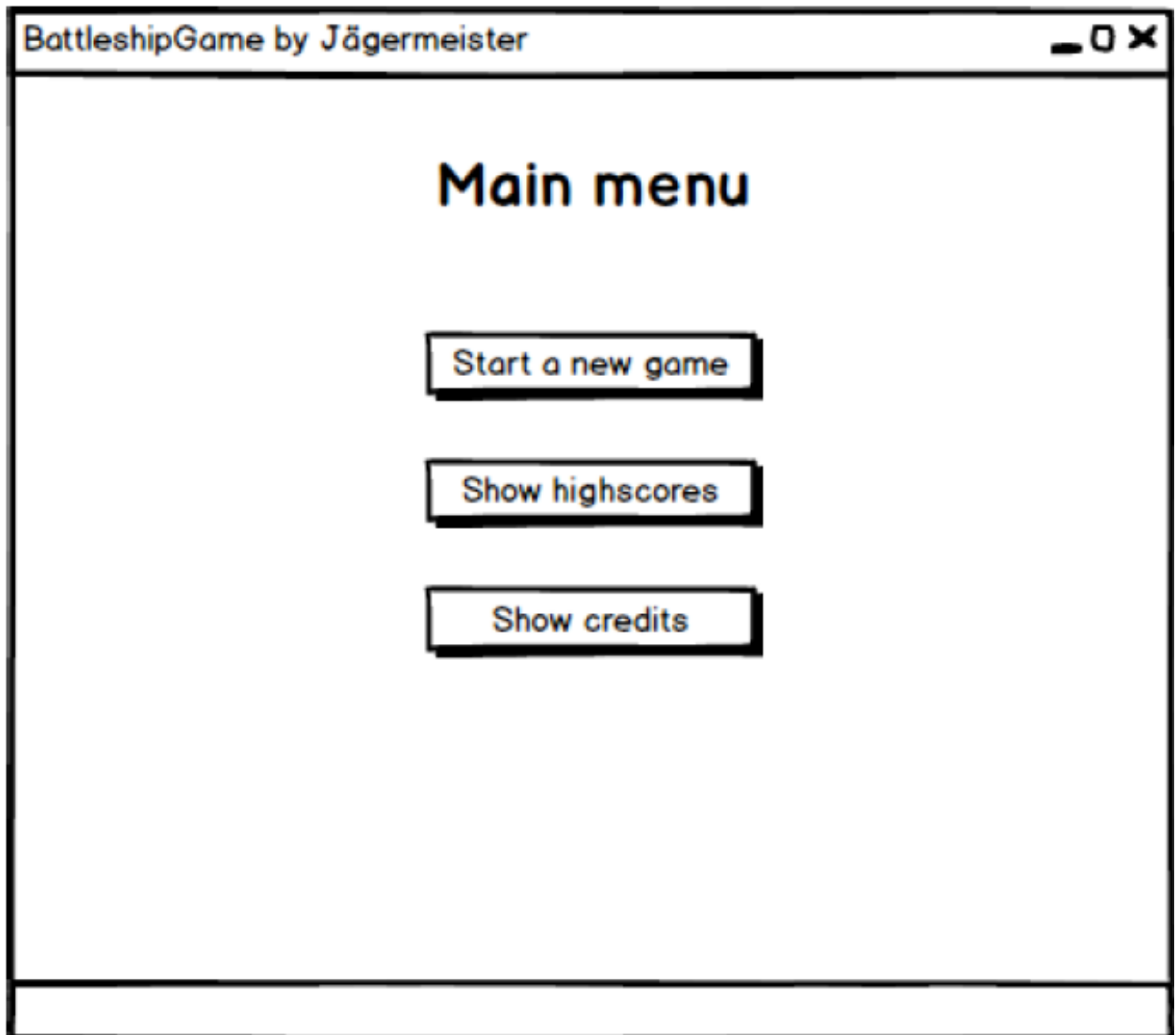
4.1. Splash Screen



Mock-up 1: Splash screen

This is our splash screen so this picture appears while the game is loading and before you enter the main menu.

4.2. Main Menu



Mock-up 2: Main menu

This is our welcome screen where it is possible to start a new game, view the highscores or enter the credits menu. With a click on the "Start a new game" button you enter a menu where both players can choose their name.

4.3. Highscores

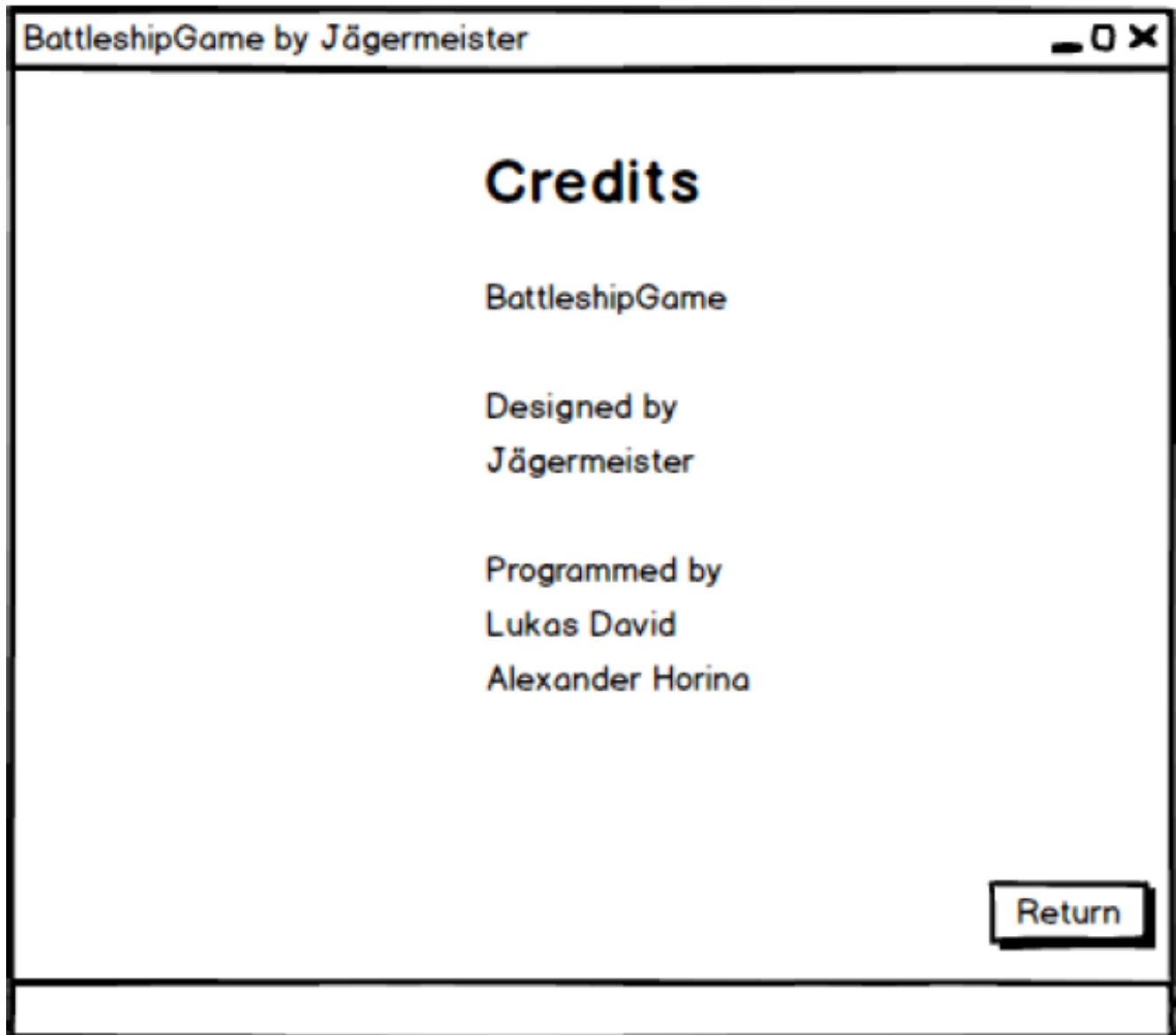
BattleshipGame by Jägermeister				
Highscores				
Date	Player	Game name	Number of moves	Replay
2017/12/20	Alex 40	Holy Battle	29	X
2017/12/27	davidluk	Battle of Graz	31	X
2017/01/20	Battlelor	The song of cold	39	X
2017/12/24	krkor	Deadly Encounter	41	X
<div>Clear ScoreReturn</div>				

Mock-up 3: Highscores

In the highscores menu you see the best players in descending order. You also see the date of the game, its name the number of moves used and it is possible to replay this game.

At the bootom there are two buttons with "Clear Score" you delete all the entries form the highscores list and "Return" brings you back to the main menu.

4.4. Credits



Mock-up 4: Credits

Here you see who designed and programmed the game. We also plan to include license information and to mention any sources we used for the programming process. This page also has a "Return" button to bring you back to the main menu.

4.5. Name Screen

The image shows a window titled "BattleshipGame by Jägermeister" with standard window controls (minimize, maximize, close) in the top right corner. The main content area contains two prompts for player names. The first prompt, "Player 1 choose name:", is followed by a text input field containing the name "Alex". The second prompt, "Player 2 choose name:", is followed by a text input field containing the name "Lukas". At the bottom right of the window, there are two buttons: "Return to main" and "Next".

BattleshipGame by Jägermeister

Player 1 choose name:

Player 2 choose name:

Mock-up 5: Name screen

In this window both players have to choose a name. When every player entered a name a click on "Next" brings you to the edit screen.

4.6. Edit Screen

BattleshipGame by Jägermeister

Playername: Alex

Ships remaining:
Desytrover(Length:5)
Cruiser(Length:2)

Vertical

Horizontal

X Position:

Y Position:

Place

Return to main

Next

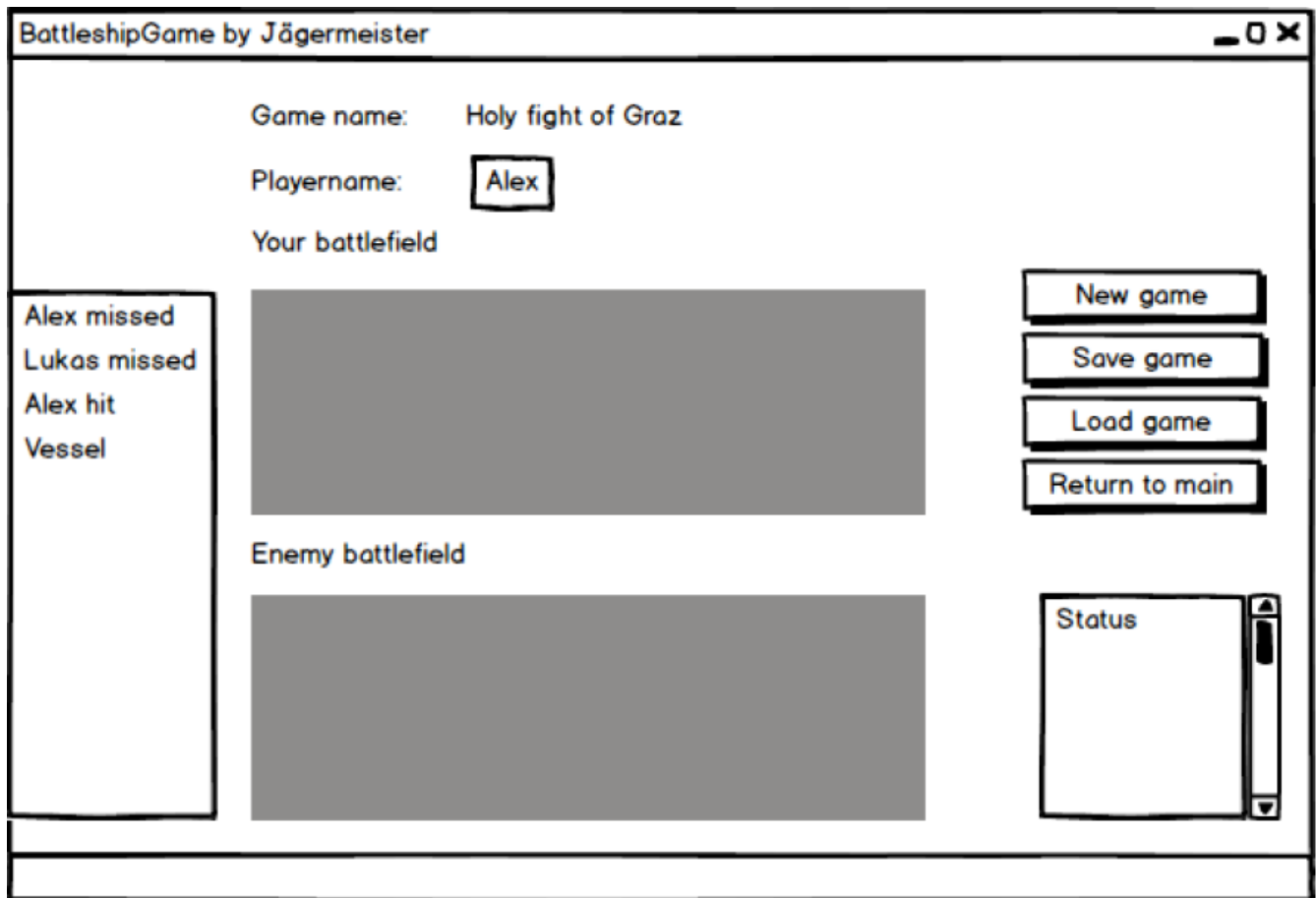
Place your ships!

Mock-up 6: Edit Screen

This is the edit screen where the players place their ships. At the top there is a list where you see the remaining ships and their length. You can decide if you want to place the ship vertical or horizontal and then you have to set the X and Y Position and click "Place"

On the right side you see an graphical illustration of your placed ships. When every ship is placed you can click "Next" to enter the battlefield or you can return to the main menu.

4.7. Battlefield



Mock-up 7: Battlefield

In this window finally we see the actual game. At the top there is the game name which is generated from a list and the player name. On the left side we have a log where you can see if a player missed or hit a ship.

On the right side there are a few buttons. "New game" brings you back to the screen where every player chooses his name. It is also possible to save and load a game or to go back to the main menu.

On the right upper part we see a status log. There we see the ships remaining and how often they have been hit by a player.