**== Time expenditure: battleship assignment**|\*VIER- Die phantastischen Vier \*  
|\*Arneitz, Rinnhofer, Ruggenthaler, Wallner\*  
  
[cols="1,1,1, 1,4", options="header"]  
.Time expenditure  
|===  
| Student  
| Date  
| Estimated Hours  
| Actual Hours  
| Description  
  
| wallnerb15  
| 13.01.18  
| 2  
| 3  
| working on the mockups, finishing mockups (Proj. Version 1), working on the project-report  
  
| ruggenth15  
| 13.01.18  
| 1 1/2  
| 3  
| working on the project-report, fixing some problems with the paths used for sound effects and images  
  
| wallnerb15  
| 13.01.18  
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| estimating effort needed, estimating costs, finishing project-report  
  
| arneitzj15  
| 13.01.18  
| 1  
| 1/2  
| discussing process with Thomas- how to implement the Multiplayer mode, which model/way fits best? Server/Client idea, server should create timestamps and client should furthermore check if given time is not extended, followed by a connection between server and client  
  
| rinnhofe15  
| 13.01.18  
| 1  
| 2 1/2  
| working with Jakob- doing some research on Stackoverflow, Github and other pages. Came up with the idea of using sockets. Creating concept where an enduser is able to join a room or leave a room, handled via portnumbers (start-> port is listening)  
  
| Arneitzj15  
| 13.01.18  
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| while discussing we came up with a better idea und found some useful solutions for our multiplayer problem -> Socket IO (usually used for instant chat)  
  
| rinnhofe15  
| 13.01.18  
| 1/2  
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| using the whiteboard for visualize our ideas (construction and usage of sockets, how the connection between the server and the client should work, how the game should work)  
  
|rinnhofe15  
|13.01.18  
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|exploring how socket io is working exactly. Exists of 2 Libraries, Server and Client. Useful extension from (web) playframework: Socket IO Server (waiting for clients, also has internet ports). Client Socket IO, via sbt, Socket Library available for Android -> perfect, because it’s written in Java and we can use it for our project  
  
|arneitzj15  
|14.01.18  
|1/2  
|2  
|tried to include socket io in our project, came up with a few problems which weren’t easy to solve (e.g. “no main class detected”), trying to import the needed dependencies, also came up with many problems  
  
|arneitzj15  
|14.01.18  
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|fixing problems. Important steps: 1. Import project -> build sbt open, 2. Added library dependencies by lazy val battleship. Useful manual: PlayFramework (Git), cloned PlaySocket IO  
  
|rinnhofe15  
|14.01.18  
|1/2  
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|using the whiteboard again for visualizing the newest ideas of how the game should work  
  
|arneitzj15  
|14.01.18  
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|working on the CSS and jfx, added JOIN GAME Button, implementing the newest concept and added many additional screens and buttons  
  
|rinnhofe15  
|14.01.18  
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|trying to fix many errors, including framework to our project is very difficult (maybe too difficult), especially combining the framework app with the battleship app, sbt is always making problems  
  
|rinnhofe15  
|14.01.18  
|1/2  
|1  
|searching for an alternative version of our framework. Came up with some Lightweight Library, which only contains the needed Socket IO Server and Client Implementation and no superfluous additional functions like the framework app. Found some useful implementation of the lightweight library -> netty-socket IO (mrniko on Git). Only need to create an instance -> start method -> server  
  
|arneitzj15  
|14.01.18  
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|trying to implement different nice looking fonts from the web. Came up with some problems. Doing some research on stackoverflow. Download TTIF and embed in BattleshipFX start method, code written in css – file. should load custom font, font is not applied. After 3 hours of desperation and anger decided to not using some fancy font  
  
|arneitzj15  
|14.01.18  
|8  
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|Class structure, no fleet, huge changes, different style so that it is optimized for future development and our server-client concept multiplayer-mode.  
  
|rinnhofe15  
|14.01.18  
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|doing some coding, config server, define getter & setter (name & message)  
  
|rinnhofe15  
|14.01.18  
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|some major problems turned up, no response of the server when receiving requests via socket io. So I have to change the concept, now no need of OK Messages in the communication between server and client, response from now as as broadcast message (who did what)  
  
|rinnhofe15  
|14.01.18  
|4  
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|implementing the created concept into our battleship app. From now on server gets started and automatically creates a new client. now the clients communicate with each other via emit messages.  
  
|rinnhofe15  
|15.01.18  
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|convert function between json and object. Client only knows json, server only object. Difficulties with communication. Helper is needed  
  
  
|arneitzj15  
|15.01.18  
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|implementing helper. Conversion works. Communication works. Nice  
  
|rinnhofe15  
|16.01.18  
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|restructuring code, make it look more fancy.  
  
|rinnhofe15  
|17.01.18  
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| GameController changes. implementing visibility. screen needs to be locked and screen needs to turn white when certain player´s turn. Fields must be invisible. finding a workaround. postponing the new game save game load game functionality for development of multiplayer mode.  
  
|arneitzj15  
18.01.18  
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| Listener concept, certain states or processes in the game mus be transferred between the two clients, server is interface. Player 1 needs to trust Player 2 with game ship. huge amount of work would be done for central store on server. we decide not to do this.  
  
|arneitzj15  
|18.01.18  
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|Position now gets to the other player, turn shot or turn water. implemented now other client gets the state. ping pong between player 1 and 2 established.  
  
|wallnerb15  
|18.01.18  
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|Testing and fixing some minor problems. Concept works. Only be careful when to start instances. no finish placement before player 2 connects. close tab in intellij always. no simple exit windows.  
  
|rinnhofe15  
|19.01.18  
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|15  
|trying to implement load and save concept. came up with hundreds and thousands of problems. Protobuf writing. how to save changes in files when client is leaving game how reconnect. how does he get back all information. impossible for me to implement.  
  
arneitzj15  
|19.01.18  
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|working on the fxml file for the credit screen, doing some bugfixes.  
  
|rinnhofe15  
|19.01.18  
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|credit screen link.  
  
|wallnerb15  
|19.01.18  
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|testing the game, problems with connection between two player on network. changing ip internally in code. turns to work out finally. changed localhost to ip.  
  
|teammeeting  
|20.01.18  
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|discussing process, problems and goals achieved and discussed further steps to deliver a great project and get the necessary points.   
  
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