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1. 2017

1.1 October

Our Project (2017-10-05 11:09) - superwomantinf16b4

We are a group of three students studying B. Sc. Computer Science at the DHBW Karlsruhe. During our lecture of Software Engineering we have to implement a program. On this website we will inform you about the progress of our project.

We decided to program a web-based game. Our first idea was to create a Jump'n'Run game. But our game will be more than just a normal game - while playing it you can also improve your mathematical abilities and your power of concentration.

One of the most famous Jump'n'Run game is Super Mario. As we are a group of just girls, we used a combination of these two factors to create our project name - Super Woman. We will implement different levels which will not only differ in the difficulty, but also on the task that the player has to fulfill. For example in some levels the player has to solve arithmetic problems and in others the user has to collect the fitting letters for a given word.

We will publish parts of our source code here and hope to get your comments to help us to create our game the best way possible.

Thank you for reading our blog! :)

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dennyfl (2017-10-12 11:08:23)
So do you plan on using the traditional Super Mario mechanics, like jumping, monsters, coins and what else and just add math into the mix? Or will there be like math based puzzles or math monsters? Like how do you plan to include math into your game?

superwomantinf16b4 (2017-10-12 11:27:09)
We planned to use the traditional Super Mario mechanics like jumping or monsters. But we want to adapt them to the different themes (letters, maths etc.) like you already mentioned. For example you will get a math equation at the beginning of the level which you will have to solve during the game. In order to solve it, you have to jump against blocks with numbers and arithmetic operators. The numbers are scattered in the level and you have to choose only the ones which fit in the equation. Thank you for your feedback! :)

Jannik Upmann (2017-10-12 11:27:27)
It´s a nice Idea :) be carefull about the Nintendo Textures. This made problems for the Flappy Bird application. how do you plan your controlls ? This is a super game to play on an Smartphone with an external joystick.

superwomantinf16b4 (2017-10-12 11:47:11)
We will make sure not to injure the copyright of Super Mario. There are a lot of other Jump'n'Run games which are also based on the same principles and they don't have problems. At the beginning we planned to just implement a website to play the game. We will think about adding an app to add later on. Thank you for your feedback! :)

possiblynotpotatoguy (2017-10-12 11:34:22)
This is an interesting idea, with potential to help younger kids to learn maths. My question is, will you just use math problems and finding letters of a word as tasks? Or are you going to implement other subjects like history, physics, geography at a later time? Also, what do you think you could implement a function to track the learning success of the player?

superwomaninf16b4 (2017-10-12 11:52:28)

We will start with implementing the themes "mathematics" and "words" but we could also imagine to implement other levels later. For the theme "history" we thought about finding the right year dates to a given historical event or you will just see a picture of a historical person (e.g. Napoleon) and you will have to create the name with the letters. Thank you for your comment! :)

Midterm Summary – Super Woman (2017-12-14 10:17:53)

[...] Week 1: Our Project [...]

Final Presentation – Super Woman (2018-06-20 12:05:19)

[...] Week 1: Our Project [...]

Team & Technology (2017-10-12 12:15) - *superwomantinf16b4*

A project consists of different roles. In order to achieve the best result we assigned each team member the following duties:

- Requirement Specifier: Özen, Lea & Isabella

- Designer: Özen

- Implementer: Özen, Lea & Isabella

- Tester: Özen, Lea & Isabella

- Project Manager [Deadline Manager]: Isabella

- Implementer [Code Cleaner]: Lea

We plan to implement the basic features together and then everybody will get specific assignments (database connection, game development etc.).

For programming it we are planning to use JavaScript and Git for the version control. We will use the AngularJS framework. We also need a database to save the users and highscores, we decided to use postgreSQL. For project management we use Jira and MS Project. In addition, we use Jenkins for continuous integration. As IDE we use Eclipse and VisualStudioCode for JavaScript.

Team VSS (2017-10-16 12:44:04)
Hello Team Super Woman, I think git is a very good choice for version control, because it is very easy to use. Also Java is good choice for the back end, because we all know the language very well now. But I think Vaadin is not the best choice for the Game, maybe you should consider to use java script, because it is easier to implement. But maybe you can use Vaadin for the front end UI. Best regards, Team VSS

superwomantinf16b4 (2017-10-19 10:00:49)
Our idea was actually to use Vaadin only for the front end UI. But we consider using JavaScript, so it is useful to know somebody who can help us with problems. Thank you for your feedback! :)

possiblynotpotatoguy (2017-10-18 20:29:50)
Hello Team Super Woman, if you haven't decided on your database technology yet, you could check out MySQL. There is an Open Source version of it, which we used in our last project, a small online quiz. We also implemented an highscore system, which worked quite well, and called on the data over java. If you have any questions, just contact us. We are happy to help. Best regards, Team react

superwomantinf16b4 (2017-10-19 09:57:00)
Thank you very much! We already thought about using MySQL but weren't sure about it because we haven't worked with this database technology yet. Thus it is very good to hear another opinion on that topic! Thank you for your help! :)

dffcblog (2017-10-19 11:26:01)
Hello Team SuperWoman, We like your role seperation much, but we see that you have specified more than one person for some roles. Maybe you should specify this more precisely. Especially with the implementer role we think it is impotant to seperate it into subroles. You also haven't specified a Test Designer, but 3 persons for running tests.

Midterm Summary – Super Woman (2017-12-14 10:17:56)
[...] Week 2: Team & Technology [...]

Final Presentation – Super Woman (2018-06-20 12:05:23)
[...] Week 2: Team & Technology [...]

Requirements & Use Cases (2017-10-19 12:11) - **superwomantinf16b4**

In the following links you can find our work of this week:

- [1]Software Requirements Specification

- [2]UseCaseDiagram

[3]

1. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/SoftwareRequirementsSpecification.pdf
2. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseDiagram.PNG
3. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseDiagram.PNG
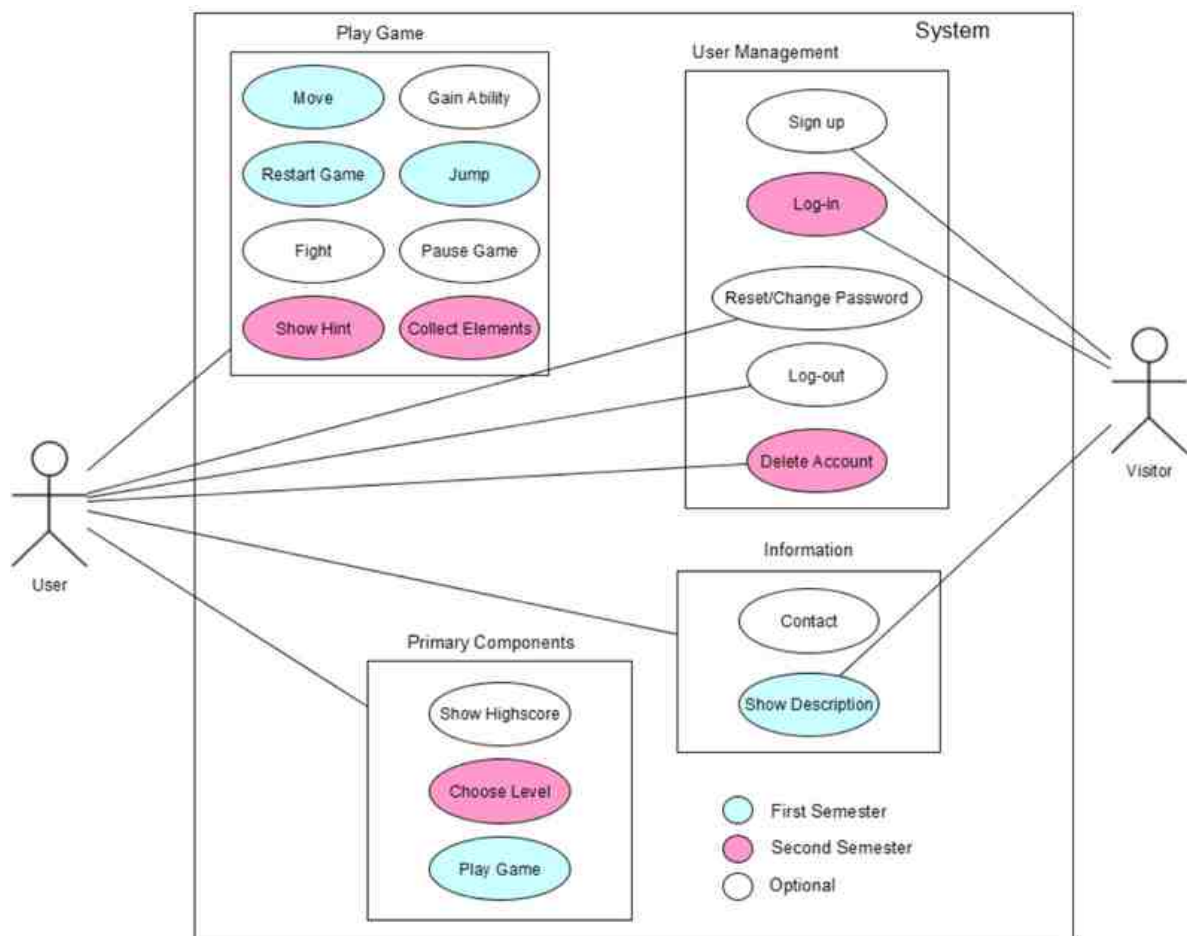
necoproject (2017-10-25 22:43:12)

Your UCD is very clear and provides an overview of general use cases your project covers. It might have been interesting to see some game-related use cases like solving mathematical questions, as stated in the SRS, but of course this can change during the development. Your SRS makes it clear what your project is about in detail and is also very good. It would have been cool to be able to view the document in the browser though, like a markdown page on github, but it's not that important. Apart from that, your post looks promising. Greetings, The NeCo Team

superwomantinf16b4 (2017-10-26 10:13:53)

Dear team NeCo, thank you for your comment! :) We will think about adding some game-related use cases like you suggested, but we thought that it is enough to include "Change level" (this includes all levels for the different themes). Moreover we have already changed the file type of our SRS-document. Best regards, Team SuperWoman

Team CCR (2017-10-26 08:38:25)

Hello Team Super Women, your use case diagram is very well structured and organized. Although we have one small question: what is meant by the use case "Contact"? Maybe you could add another word here to make it clearer. And as already mentioned, we suggest you to use a .md file. In the beginning it may be hard, but it really pays off. Best regards, Team CCR

superwomantinf16b4 (2017-10-26 09:26:32)

Hello Team CCR, thank you for the suggestion of using a .md file. We have already changed the file type of our SRS document. The case "Contact" means that a user can contact us for example if they have a good idea for a level, which we can include in the game or for any other questions. For more details you can check our SRS at point 3.1.2. Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:17:59)
[...] Week 3: Requirements & Use Cases [...]

Final Presentation – Super Woman (2018-06-20 12:05:26)
[...] Week 3: Requirements & Use Cases [...]

Use Cases (2017-10-29 13:14) - **superwomantinf16b4**

This week we examined some of our use cases in more detail. You can find the corresponding specifications and mockups here:

- [1]SignUp-Use Case Specification

- [2]Choose Level-Use Case Specifcation

- [3]Delete Account-Use Case Specification

- [4]Reset/Change Password-Use Case Specification

- [5]Show Highscore-Use Case Specification

Thank you for reading our blog! :)

1. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/SignUpSpecification.pdf`
2. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/ChooseLevelSpecification.pdf`
3. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/DeleteAccountSpecification.pdf`
4. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/ResetChangePasswortSpecification.pdf`
5. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/ShowHighscoreSpecification.pdf`

Mix-It! (2017-11-02 11:16:42)
Hey Team Superwoman! Your two use cases are really good! They are very detailed and well structured. The documents seem to be well structured two. In the ChooseLevelSpecification two "no"-arrows from if-statements point to another arrow. I think they should point to an event. Best regards Team Mix-It!

superwomantinf16b4 (2017-11-02 11:18:07)
Thank you for your feedback! We will fix the mistake! :)

Team VSS (2017-11-02 11:58:33)
Hey Super Womans, wow you made the two use cases really nice. And the mockups illustrate the use cases very well. I have noticed that you used pdf as document type. Maybe you should consider to use markdown in the future because it is easier to version control. In the Sign Up use case you return no response to the user if the user entries are incorrect. Maybe you should add a kind of error indication for the user. In the ChooseLevelSpecification use case you write something inside the parallelograms, I think you should not do it. Maybe you should also consider to add a response to the ChooseLevelSpecification use case if a level is not unlocked. Kind regards, Team VSS

superwomantinf16b4 (2017-11-02 12:02:50)
Dear team VSS, we will have a look at markdown so that we can use it for further documents. Moreover we already corrected the mistakes you mentioned, thank you very much! :) Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:18:02)
[...] Week 4: Use Cases [...]

Final Presentation – Super Woman (2018-06-20 12:05:29)
[...] Week 4: Use Cases [...]

1.2 November

**First Scrum** (2017-11-08 14:27) - superwomantinf16b4

This week we had a look at different project management tools - we decided to use Jira! We integrated it with GIT and our IDE.

We already started our first sprint last thursday which will take two weeks and moreover we created some issues on our backlog. Here you can have a look at our first sprint:

T	Key	Summary	Assignee	Reporter	P	Status	Resolution	Created ↓	Updated
	SUP-6	Create window with background and avatar	Isabella Schmidt	Isabella Schmidt	↑	IN PROGRESS	Unresolved	02/Nov/17	06/Nov/17
	SUP-5	Welcome page with Vaadin	Lea Brock	Isabella Schmidt	↑	IN PROGRESS	Unresolved	02/Nov/17	08/Nov/17
	SUP-4	Avatar can jump	Lea Brock	Isabella Schmidt	↑	RESOLVED	Unresolved	02/Nov/17	08/Nov/17
	SUP-3	Move avatar	Isabella Schmidt	Isabella Schmidt	↑	RESOLVED	Unresolved	02/Nov/17	06/Nov/17
	SUP-2	Design Superwoman-Icon	Özen Beyazashin	Isabella Schmidt	↑	IN PROGRESS	Unresolved	02/Nov/17	08/Nov/17
	SUP-1	Design background image	Isabella Schmidt	Isabella Schmidt	↑	RESOLVED	Unresolved	02/Nov/17	06/Nov/17

Here you can see two of our Burndown Charts:

[1]

[2]
16
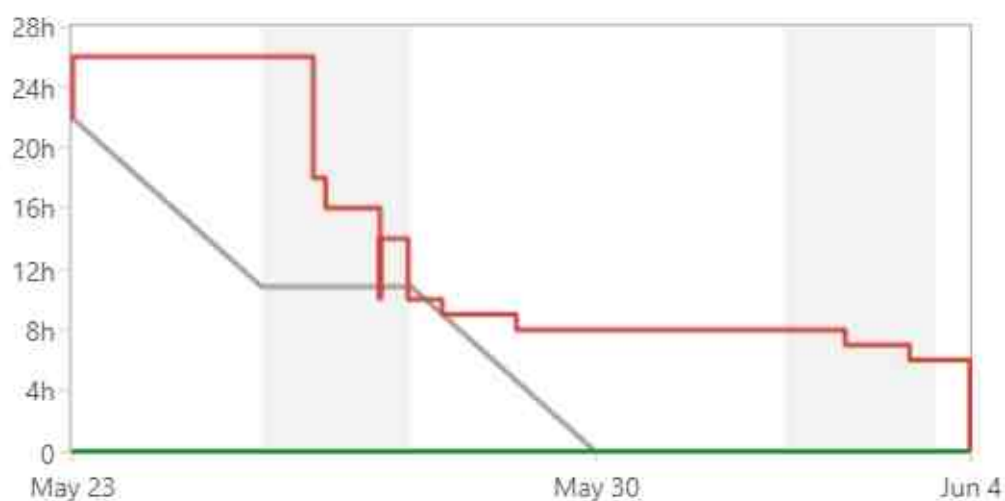
Moreover we created a first prototype of our game:

The avatar can already move & jump, but the creation of the SuperWoman-avatar is still in progress.

1. `https://jiratinf16b4.it.dh-karlsruhe.de:8443/secure/RapidBoard.jspa?rapidView=4&projectKey=SUP&view=re porting&chart=sprintRetrospective&sprint=55`
2. `https://jiratinf16b4.it.dh-karlsruhe.de:8443/secure/RapidBoard.jspa?rapidView=4&projectKey=SUP&view=re porting&chart=sprintRetrospective&sprint=46`

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dffcblog (2017-11-08 15:29:04)

Hello Team Superwoman, Your prototype looks very good and your issues are very well tracked. Maybe you can also link your Burn-Down Chart and add a hyperlink to your jira-project in your blogpost. For this you must only change the visibilty of your project. Best Regards and much fun at your project! Team DFFC

superwomantinf16b4 (2017-11-08 15:48:56)

Hello team dffc, unfortunately our Burn-Down-Chart is broken because the workflow has been changed during the run-time of our sprint. We will add a link to the chart for our next sprint! :) Thank you for your advise, we will add a link to our jira-project later. Best regards, team SuperWoman

Team VSS (2017-11-08 16:38:57)

Hello Super Women, well made :D But you should mention your GIT and IDE integration in you blog post. And maybe make your pictures clickable. Best regards, Team VSS

superwomantinf16b4 (2017-11-09 10:21:01)

Hello team VSS, we're happy to have received your feedback! :) We added a link to our pictures in order to make them clickable. Furthermore we added a sentence to mention our GIT and IDE integration in our blog post. Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:18:05)
[…] Week 5: First Scrum […]

Final Presentation – Super Woman (2018-06-20 12:05:32)
[…] Week 5: First Scrum […]

Gherkin-Feature files (2017-11-13 13:17) - *superwomantinf16b4*

This week we learned about the basics of Cucumber and Gherkin. Then we created the feature files for our two Use Cases SignUp and ChooseLevel.

Here you can see the feature files:[1]

```
  ChooseLevel_Test ⊠

  1 Feature: ChooseLevel
  2      As a user
  3      I want to choose a category and a level of the choosen category
  4
  5⊖     Scenario: ChooseLevel successful
⚠ 6⊖         Given User is on ChooseLevel page
⚠ 7⊖         When User clicks on a category
⚠ 8⊖         And Chooses a level which is unlocked
⚠ 9⊖         Then The level opens
⚠10⊖         And User can play the level
 11
 12⊖     Scenario: ChooseLevel failed
⚠13⊖         Given User is on ChooseLevel page
⚠14⊖         When User chooses a level which is locked
⚠15⊖         Then User get shown an error message
⚠16          And Should choose a new level
```

You can find our test code for ChooseLevel [2]here.

[3]

```
  *SignUp_Test ⊠

  1 Feature: SignUp
  2      As a visitor
  3      I want to create a new account with my name, emailaddress, a password and
  4      an education level
  5
  6⊖     Scenario: SignUp successful
⚠ 7⊖         Given Visitor is on SignUp page
⚠ 8⊖         When Visitor provides username <username>, email <email>, password <password>
⚠ 9⊖         And Chooses education level
⚠10⊖         Then Visitor created an account
⚠11⊖         And Visitor should be shown a success message
 12
 13⊖     Scenario: SignUp failed (incorrect input)
⚠14⊖         Given Visitor is on SignUp page
⚠15⊖         When Visitor provides username <username>, email <email>, password <password>
⚠16⊖         And Chooses education level
⚠17⊖         And Account with the given email or username already exists
⚠18⊖         Then Visitor did not create an account
⚠19⊖         And Visitor should be shown an error message
 20
 21⊖     Scenario: SignUp failed (missing input)
⚠22⊖         Given Visitor is on SignUp page
⚠23⊖         When Visitor did not fill in all required elements
⚠24⊖         Then Visitor did not create an account
⚠25⊖         And Visitor should be shown an error message
```

You can find our test code for SignUp [4]here.

You can also find the feature files in our Use Case Specification:

- [5]ChooseLevelSpecification
- [6]SignUpSpecification

Our feature files run successfully without errors, which can be seen in the following output:
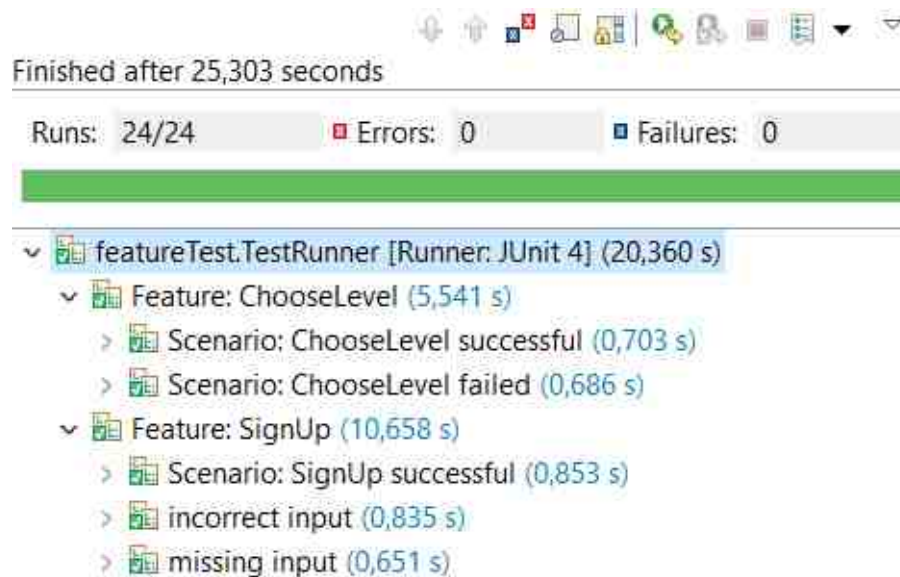
The JUnit output
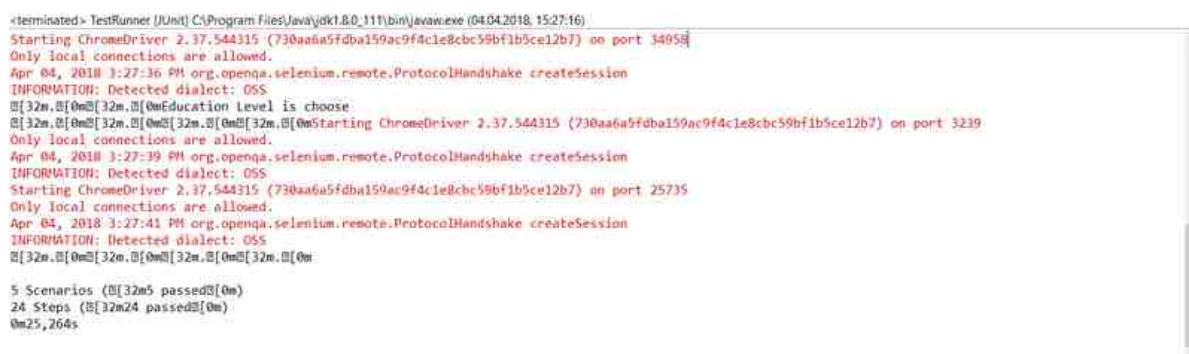
The console output

1. https://github.com/ItalisaS/SuperWoman/blob/master/src/featuretest/ChooseLevel_Test.feature

2. https://github.com/ItalisaS/SuperWoman/blob/master/src/featuretest/ChooseLevel_StepDefinition.java

3. `https://github.com/ItalisaS/SuperWoman/blob/master/src/featuretest/DeleteAccount_Test.feature`

4. `https://github.com/ItalisaS/SuperWoman/blob/master/src/featuretest/SignUp_StepDefinition.java`

5. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/ChooseLevelSpecification.pdf`

6. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UseCaseSpecifications/SignUpSpecification.pdf`

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sgfaweb (2017-11-15 11:14:33)

Hi SuperWoman Team, Your .feature Files look really nice, and I think they will work like that. Just the second scenario of the SignUp use case misses the When visitor provides information Statement. And you could check for the same username and stuff as well in the second use case. Everything else seems like great work! Kind regards, SGFA

superwomantinf16b4 (2017-11-16 10:33:09)

Hi SGFA, thank you for your comment. We have changed the SignUp scenarios. Best regards, Team SuperWoman

Alex (2017-11-15 12:28:26)

Hey, Your .feature files look very good! you have two scenarios with the same name, which you should make more descriptive. Best regards, Alex

superwomantinf16b4 (2017-11-16 10:36:46)

Hi Alex, thank you for your comment. We have changed this already. Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:18:09)

[...] Week 6: Gherkin-Feature files [...]

Testing – Super Woman (2018-06-20 11:24:15)

[...] to check the navigation through our HTML pages. More detailed information can be found in this blog entry and you can find our CucumberTest [...]

Final Presentation – Super Woman (2018-06-20 12:05:35)

[...] Week 6: Gherkin-Feature files [...]

Class Diagram (2017-11-22 19:00) - *superwomantinf16b4*

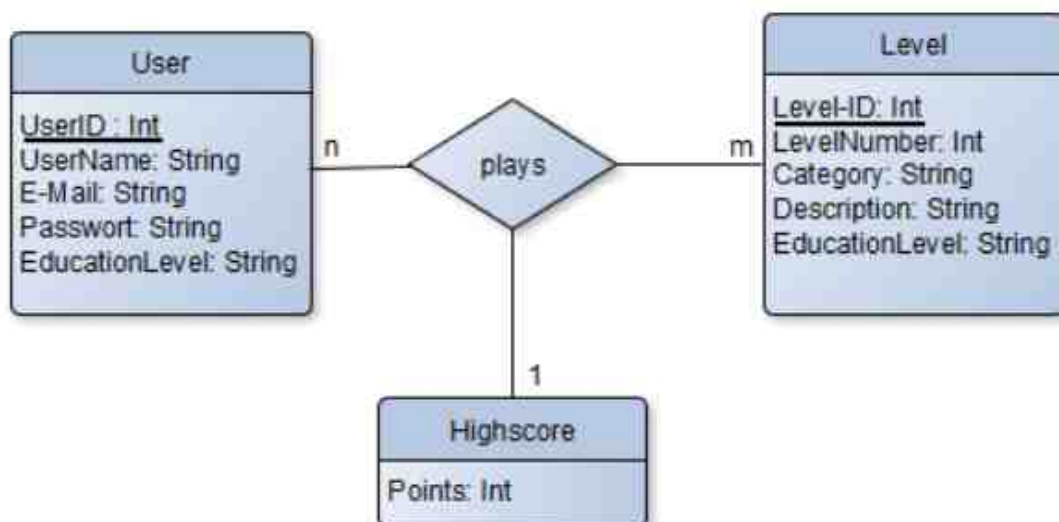This week we created a UML Class diagram. Surely there are still some attributes and classes missing, we will add them during the programming progress and adapt our Class Diagram according to the changes in our code. This version is just for you to get a first idea of how our classes will be connected:

[1]
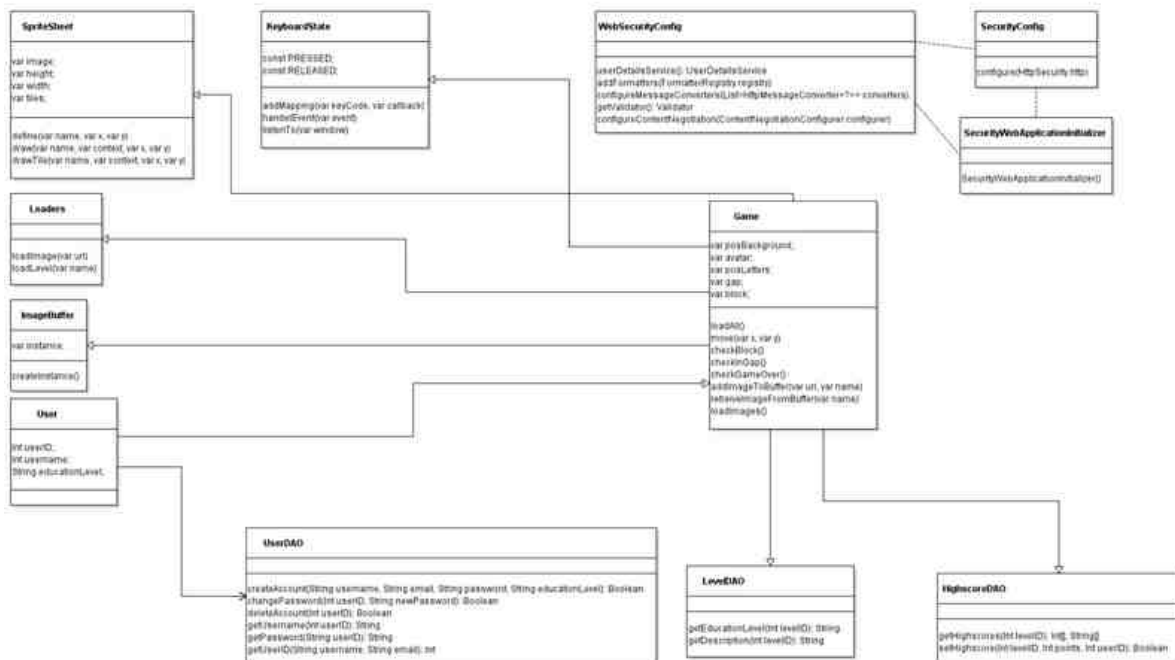
Moreover, we created a Database Diagram to show you which entities our Database will contain:

[2]

Thank you for reading our blog, stay tuned! :)

1. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UMLandDatabase/UMLClassDiagram.png`
2. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UMLandDatabase/Database%20Diagram.PNG`

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thomaspoetzsch (2017-11-23 09:50:12)

Hey there! Your class diagram seems fine. Why didn't you create models for the level and the highscore data access object? You are loading your level via a levelID. Will there be a levelModel and a database table or will you implement it in some other way? Do you already know how your database will look later on? Did you already create tables? Best regards, Thomas

superwomantinf16b4 (2017-11-23 11:03:14)

Hey Thomas! :) We will see later if we will have to add models for the level and the highscore data access objects. Maybe you didn't see, but we already published a first scheme of our Database diagram where you can see which database tables we planned to implement. Best regards, Team SuperWoman

possiblynotpotatoguy (2017-11-23 10:07:00)

Hey Team Super Woman I like your class diagram. It seems good. But I have a question about your database. You put your three tabels into a three way relation. But as far as I understand your model, it would be better to put the attributes of your Highscore table into the relation between level and user. Your level tables contain your set of levels that exist which can be played by all players. The level table itself shouldn't contain a user ID then, because then a level would be contstrained to only one user. The same argument for the user table. A user could play only one level then. So they shouldn have a direct relation. But with your Highscore table you could save your Highscores and the history of played games. So this table would be the common link. Best Regards, Team react.

superwomantinf16b4 (2017-11-23 10:24:37)

Hey Team react, thank you for your advise! :) We understand what you mean but the problem is that, in contrast to what you thought, our user can't play every level. Related to the user's education level we will create different levels with different degrees of difficulty. This means also that not all levels are unlocked for all users. Do you have another idea how we could avoid the three way relation? Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:18:12)
[...] Week 7: Class Diagram [...]

Final Presentation – Super Woman (2018-06-20 12:05:38)
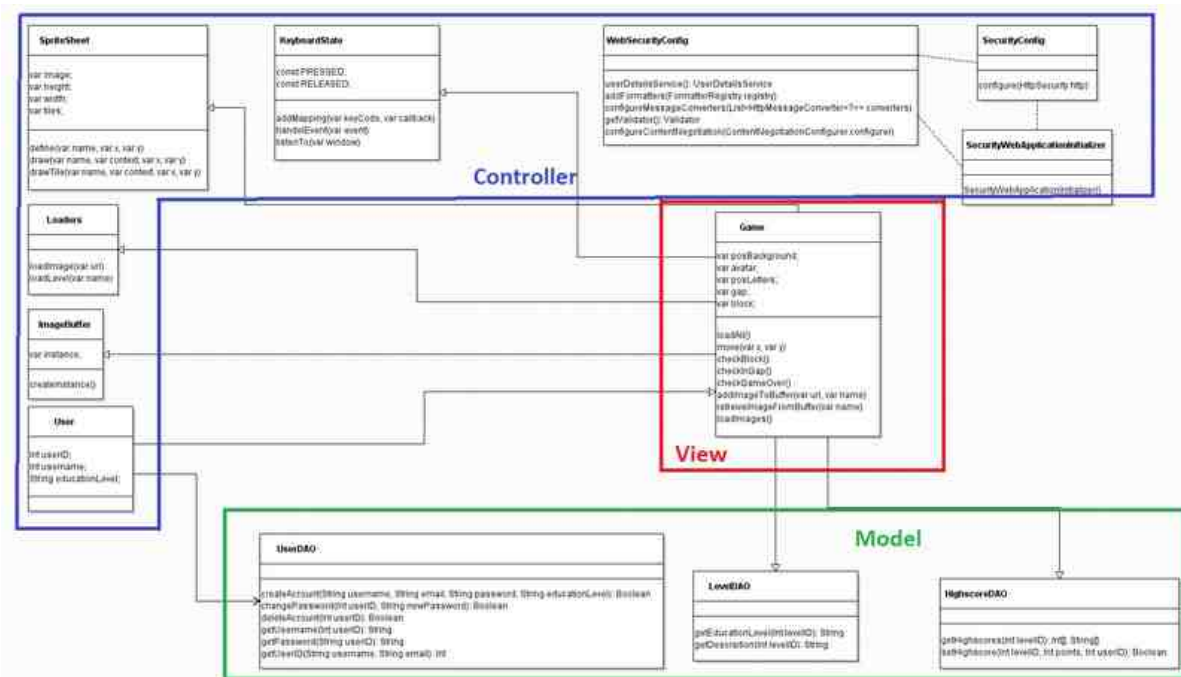[...] Week 7: Class Diagram [...]

Software Architecture Document (2017-11-23 14:01) - superwomantinf16b4

Hey there :)

Today we created the [1]Software Architecture Document to give you an overview of our architecture model. We will add more details later on and keep it up to date.

Here you can see our redrawn ClassDiagram where you can see which classes will be the Model, View and Controller:

[2]

Thank you for reading our blog!

1. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/SoftwareArchitectureDocument.pdf
2. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/UMLClassDiagramMVC.PNG

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dennyfl (2017-11-29 19:31:14)
Hey team super woman, I think your new diagram is pretty good and the separation into the 3 categories seems solid. You have one small spelling mistake, redrawed should be redrawn. Also it is not possible to open your software architecture document, maybe something went wrong by linking it, you should look into that. Best regards Team dffc

superwomantinf16b4 (2017-11-30 09:36:03)
Hey Denny, we corrected the spelling mistake, thank you! And the link is working on our side, maybe you can check it again? Best regards Team SuperWoman

thomaspoetzsch (2017-11-30 09:33:36)
Hey there, we really like your SAD and the diagrams you created. I think under the Use-Case View - section you are supposed to put your Overall Use Case Diagram. We were having problems viewing your document on GitHub, you should

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consider switching to markdown documents. Best regards, Thomas

superwomantinf16b4 (2017-11-30 10:34:33)
Hey Thomas, we will add the Use Case Diagram in our next revision. And we will use Markdown for the next document! :)
Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:18:15)
[...] Week 8: Software Architecture Document [...]

Final Presentation – Super Woman (2018-06-20 12:05:41)
[...] Week 8: Software Architecture Document [...]

1.3 December

Gantt Chart (2017-12-07 09:48) - superwomantinf16b4

This week we created a Gantt Chart to show you all tasks we have done so far.
We had some problems creating the Chart with the tasks we already created in our sprints on Jira. Unfortunately Jira does not comprehend an easy way to design a Gantt Chart using all the information from your sprints, that's why we used MS Project instead.

As we already had some experiences from another lecture (project management) it was no problem to create a new project plan which contains all our tasks and resources.

Here you can have a look at our Gantt Chart:

- [1]Gantt Chart

- Gantt Chart as mpp document: [2]Gantt.mpp

Stay tuned for more updates! :)

1. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/Ganttchart.pdf`
2. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/Gantt.mpp`

CCRTeam (2017-12-07 10:28:39)
Hello TeamSuperWoman, your gantt chart in MS Project looks organized and well structered. Altogether it is succeeded. But how did you get the issues of your Jira Sprints in your MS Project project? Could you export them from Jira or did you register them by hand? Good Luck with your project, TeamCCR

superwomantinf16b4 (2017-12-07 10:36:18)
Hello team CCRT, we registered them by hand. We know that this isn't the best way to create the Gantt Chart, but we had some problems exporting the issues from Jira. Best regards, Team SuperWoman

schmiefri (2017-12-07 10:29:15)
creating the future, one file at a time!

superwomantinf16b4 (2017-12-07 10:39:46)
We will change the spelling mistake in our next version. Thank you for indicating us the mistake! Best regards, Team SuperWoman

Midterm Summary – Super Woman (2017-12-14 10:18:18)
[...] Week 9: Gantt Chart [...]

Final Presentation – Super Woman (2018-06-20 12:05:44)
[...] Week 9: Gantt Chart [...]

Midterm Summary (2017-12-14 10:17) - *superwomantinf16b4*

Hello everyone! :)

In this blog post we want to sum up all the work we did so far.

Here you can find a list of the weeks we spent working on our project so far. Each Week is linked to a blog post, which contains all the useful information for the corresponding topic. Here you can also find a link to the [1]Software Requirement Specification and the [2]Software Architecture Document.

- Week 1: [3]Our Project

- Week 2: [4]Team & Technology

- Week 3:[5] Requirements & Use Cases

- Week 4: [6]Use Cases

- Week 5: [7]First Scrum

- Week 6: [8]Gherkin-Feature files

- Week 7:[9] Class Diagram

- Week 8:[10] Software Architecture Document

- Week 9:[11] Gantt Chart

You can also see our midterm presentation [12]here if you want to see an overview.

Thank you for reading our blog and for helping us with your feedback in your comments every week. Don't hesitate asking us questions and leaving us a comment!

1. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/SoftwareRequirementsSpecification.pdf`
2. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/SoftwareArchitectureDocument.pdf`
3. `https://superwoman2017blog.wordpress.com/2017/10/05/erster-blogbeitrag/`
4. `https://superwoman2017blog.wordpress.com/2017/10/12/team-technology/`
5. `https://superwoman2017blog.wordpress.com/2017/10/19/requirements-user-cases/`
6. `https://superwoman2017blog.wordpress.com/2017/10/29/use-cases/`
7. `https://superwoman2017blog.wordpress.com/2017/11/08/first-scrum/`
8. `https://superwoman2017blog.wordpress.com/2017/11/13/gherkin-feature-files/`
9. `https://superwoman2017blog.wordpress.com/2017/11/22/140/`
10. `https://superwoman2017blog.wordpress.com/2017/11/23/software-architecture-document/`
11. `https://superwoman2017blog.wordpress.com/2017/12/07/gantt-chart/`
12. `https://github.com/ItalisaS/SuperWoman/blob/master/SuperWoman.pptx`

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2. 2018

2.1   April

Hey guys,

the new semester has started and we are working on our project again! We're looking forward to a productive and successful semester.

We slightly changed the scope of this term, you can see the new Use-Case-Diagram below. The Use Cases that we will implement this semester are colored in pink.
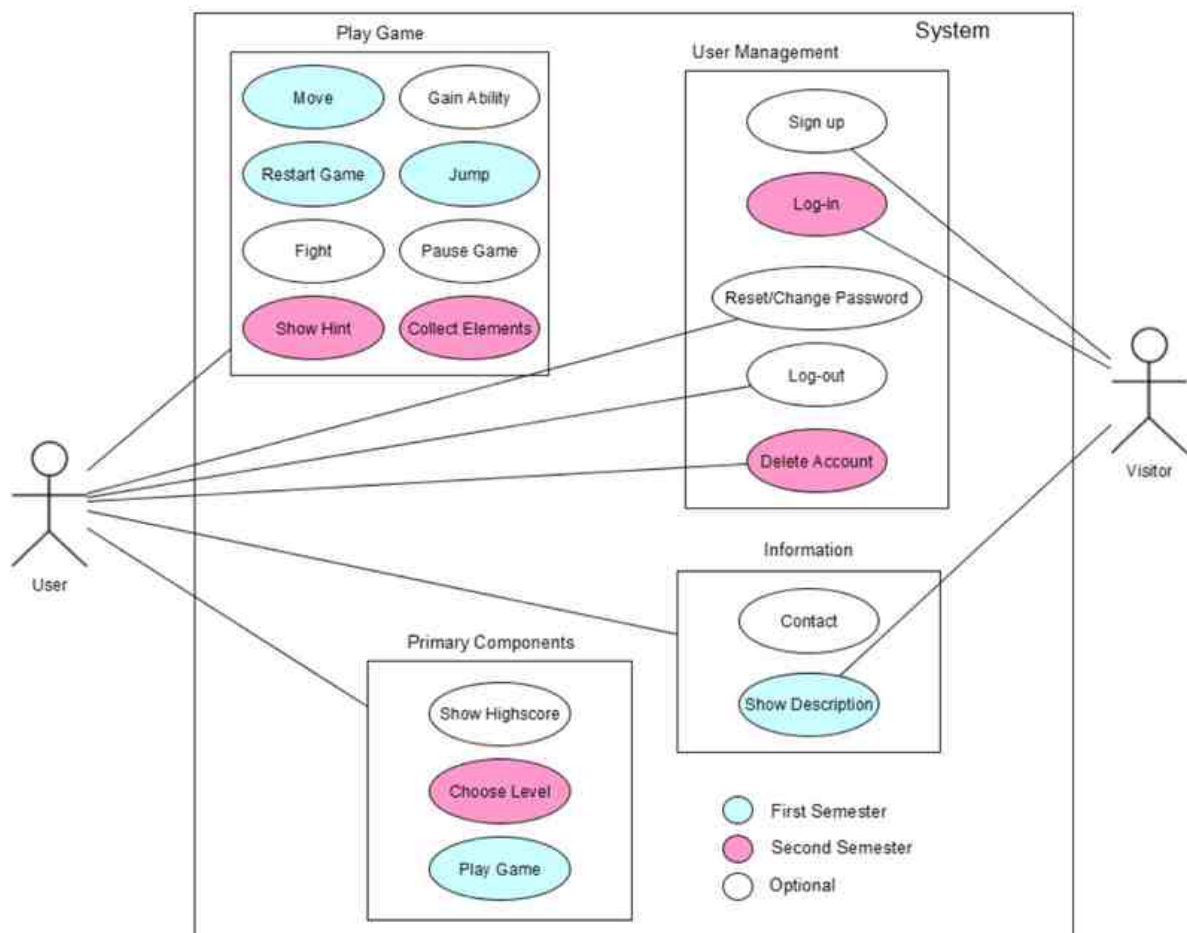
Moreover we checked how much time we spent on the use cases we implemented in the last semester. You can find the Time-Overview here:

UC	Documentation	Coding	Testing	Warm-Up time	Total
Move Avatar	0h	6h	1h	2h	9h
Restart Game	0h	1h	0,5h	1h	2,5h
Jump	0h	4h	1h	2h	7h
Show Description	1h	2h	0,5h	3h	6,5h
Play Game	0h	2h	2h	1h	5h

We also had to figure out risks of our project and collect these in a Risk Management Table:

[1]

Risk Name	Risk Description	Risk Probability Of Occurrence	Risk Impact	Risk Factor	Risk Mitigation	Person in Charge Of Tracking
Time Problems	The time planned Is insufficient	30,00 %	8	3,75	better time planning	Isa
Quality	Bad Code Quality	20,00 %	6	3,33	Code Reviews	Isa, Lea, Özen
Team Member Problem	A Team Member is Absent	30,00 %	9	3,33	Specifying a Substitute for a Task	Lea
Team Problem	Communication Problems	15,00 %	5	3	Regular meetings	Özen
Server Problem	Server is down	10,00 %	9	1,11	Check server regularly For functionality	Isa, Lea, Özen
Technical Problems	The used Software Is not working	10,00 %	9	1,11	Regular Code Backups	Isa, Lea, Özen
Technical Problems	Github Is unavailable	5,00 %	8	0,625	inform in time about Alternative programs	Isa, Lea, Özen

If you have any questions left, feel free to put them into the comment section.

Best regards,
Team Superwoman

1. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/Risks.PNG

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dennyfl (2018-04-24 21:34:25)
Hey team Super Woman, good to see that you are back ;) Your quick overview is good and we are excited to see what will come in the following months. One thing I noticed was your risk assessment...I think it would be better if you would arrange the list. So the riskiest is always on top, or maybe the riskiest 3, so as you progress people can follow your risks too and always know what you do to prevent the most "dangerous" risks. Best regards DFFC

superwomantinf16b4 (2018-04-25 08:48:07)
Hey guys, thank you for your advise, we have already changed our "Risk Management Table" on this blog entry! :) Best regards, Team SuperWoman

possiblynotpotatoguy (2018-04-25 08:48:36)
Hi Team SuperWoman, it is good to see that you are back. Your UC Diagram and tables are nice and easy to understand. But I have a question about your Risk Management table: What is the Scale of your Risk Impact column? Does it scale from

0-5 or 0-10? Otherwise the table is very good. Best Regards Team react

superwomantinf16b4 (2018-04-25 09:03:38)
Dear React-Team, thank you for your comment. We are always happy to receive feedback! :) The scale of our Risk Impact column scales from 0-10. We just thought that all these risks have quite a big impact on our project, that's why only one risks has an impact of 5 and none of it less than 5. Best regards, Team SuperWoman

Final Presentation – Super Woman (2018-06-20 12:05:47)
[...] Week 10: Risk Management [...]

2.2 May

Function Point Estimation (2018-05-01 12:00) - **superwomantinf16b4**

Hi guys,

last week we had a look at Function Points. Functions points are used to describe the scope and complexity of the use cases in a project and render possible to predict the time that you will spend on the next use cases.

We calculated the function points for five of our use cases, you can find the result of the calculations in the Excel-Sheet below:

[1]

| Use Case	Estimation (h)	Logged (h)	Transaction	Data Element Type	Record Element Type	File Type Reference	Complexity	Number of	Function Points
Restart Game	2.5								
			External Inputs	1	x	1	Low	0	
			External Outputs	1	x	1	Low	0	
			External Inquiries	1	x	1	Low	1	
			External Logical Files	1	1	x	Low	3	
			External Interface File	0	0	x	Low	0	18.72
Jump	7								
			External Inputs	1	x	0	Low	0	
			External Outputs	0	x	0	Low	0	
			External Inquiries	0	x	0	Low	0	
			External Logical Files	0	0	x	Low	2	
			External Interface File	0	0	x	Low	0	10.5
Show Description	6.5								
			External Inputs	1	x	0	Low	0	
			External Outputs	0	x	0	Low	0	
			External Inquiries	1	x	0	Low	1	
			External Logical Files	0	0	x	Low	1	
			External Interface File	0	0	x	Low	0	7.1
Show Highscore	10,825								
			External Inputs	1	x	1	Low	0	
			External Outputs	2	x	1	Low	0	
			External Inquiries	2	x	2	Low	1	
			External Logical Files	1	2	x	Low	3	
			External Interface File	0	0	x	Low	0	18.48
Delete Account	14,527								
			External Inputs	1	x	1	Low	0	
			External Outputs	2	x	1	Low	0	
			External Inquiries	1	x	1	Low	1	
			External Logical Files	1	1	x	Low	4	
			External Interface File	0	0	x	Low	0	24.8
Choose Level	14,738								
			External Inputs	6	x	1	Low	0	
			External Outputs	2	x	0	Low	0	
			External Inquiries	3	x	2	Low	2	
			External Logical Files	1	2	x	Low	4	
			External Interface File	0	0	x	Low	0	25.16

Additionally, we created a diagram to estimate the time for the new Use Cases:

[2]
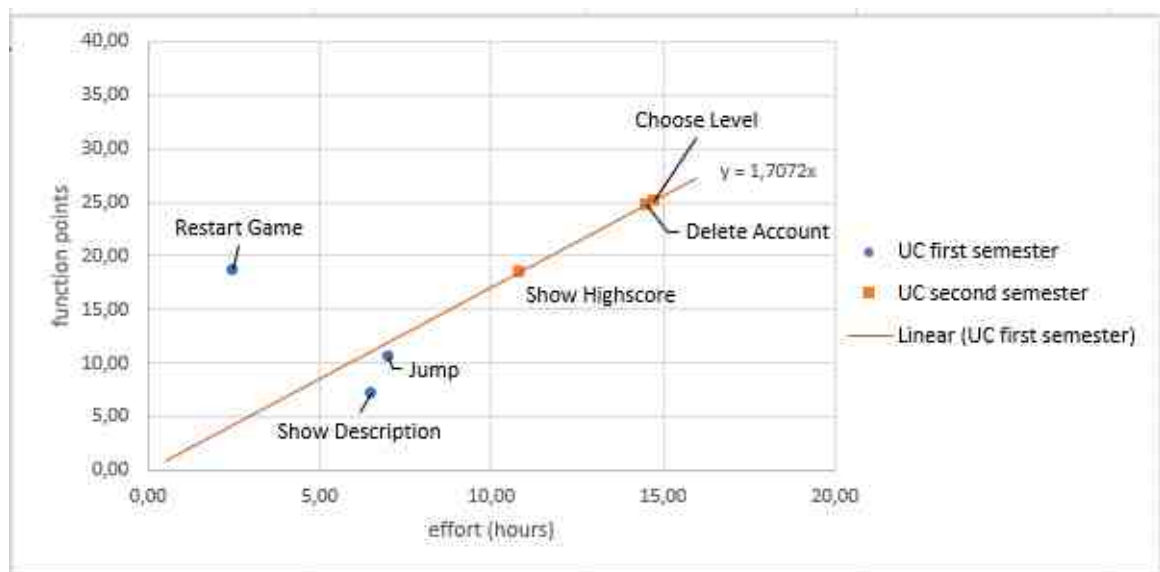
We have an outlier, our first Use Case 'Restart Game' on the left side of our diagram. The explanation for this is that this use case is quite complex as it has a lot of database connections, but we could use a lot of the code which we have already implemented for our prior use cases.

Here you can see our improved Function Point Estimation Diagram:
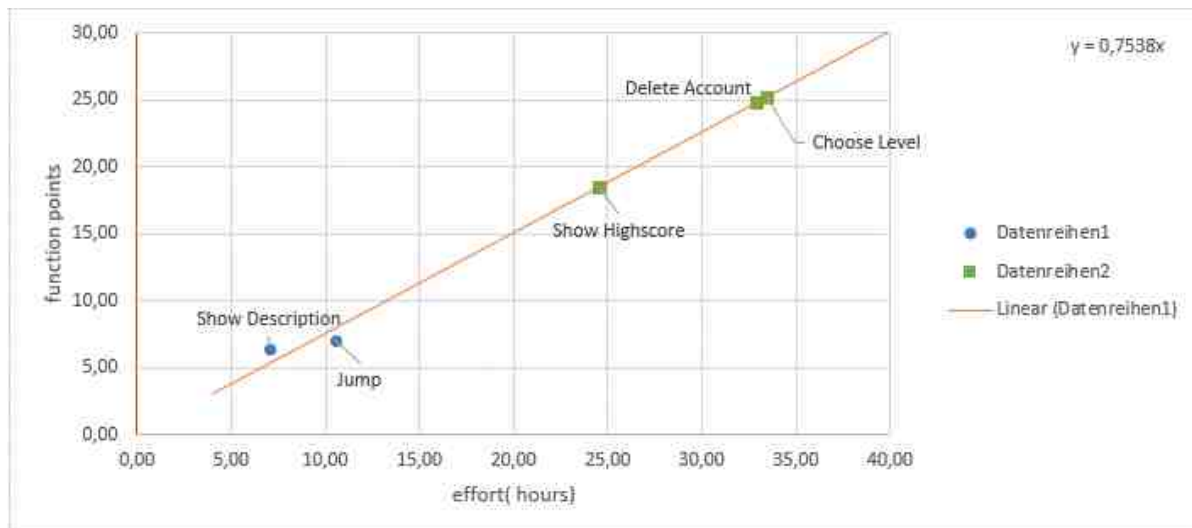
We have done this new calculation because the outlier distorts the previous results. Therefore we left out the point 'Restart Game'.

Have a great week,
Team Superwoman :)

1. https://github.com/ItalisaS/SuperWoman/blob/master/FunctionPointsUC.PNG
2. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/FunctionPointsDiagram.PNG

Team CCR (2018-05-02 09:17:00)
Hi Team SuperWoman, your blog entry this week seems nice! We especially like, that you showed the mathematical function for your line graph. But nevertheless, we suggest you to add the names of the Use Cases to the diagram. Best regards, Team CCR

superwomantinf16b4 (2018-05-02 09:29:32)
Hello Team CCR, thank you for your comment. We'll test adding the names. And upload the table modified, if this does not make it too complex. Best regards, Team Superwoman

necoproject (2018-05-02 09:22:22)
Hey team superwoman, your diagrams look good, but it seems like you are missing the complexity table. You could maybe explain why the left-most outlier doesn't follow the average line. Best regards, NeCo

superwomantinf16b4 (2018-05-02 09:31:24)
Hey team neco, we forgot to take screenshots of the complexity table. Therefore it is not so easy to reproduce it again

and add it later. But we can try to do it but the results can change. We will also explain in our entry why the one point is an outlier. Best regards, Team SuperWoman

Final Presentation – Super Woman (2018-06-20 12:05:50)
[...] Week 11: Function Point Estimation [...]

Testing (2018-05-15 18:31) - superwomantinf16b4

Hello everyone,

the topic of this week was testing our project. So we started writing tests to improve our application by finding bugs in an early stage of development. Therefore we started with writing a Testplan which you can find [1]here. It's not completly finished yet, but the key features are explained.

To avoid that faulty commits can be uploaded unnoticed, we use Jenkins. After each commit, the tests are run so that errors are immediately noticeable and can be corrected immediately. Under this [2]link you can find our Jenkins.

We use CucumberTests to check the navigation through our HTML pages. More detailed information can be found in [3]this blog entry and you can find our CucumberTests [4]here.

To test our few Java classes we used JUnit tests. Since our logic is more in JavaScript and testing them with JUnit is not easy, our tests are quite simple. You can find the JUnit tests [5]here.

As the last test variant we used user test. For this purpose, family members or fellow students have tested our website and our game by using it. This type of test also tested our JavaScript classes.

Feel free to comment below!

Your Team SuperWoman

1. `https://github.com/ItalisaS/SuperWoman/blob/master/Docs/Test_Plan_SuperWoman.pdf`
2. `https://jiratinf16b4.it.dh-karlsruhe.de/job/SuperWoman/`
3. `https://superwoman2017blog.wordpress.com/2017/11/13/gherkin-feature-files/`
4. `https://github.com/ItalisaS/SuperWoman/tree/master/src/featuretest`
5. `https://github.com/ItalisaS/SuperWoman/tree/master/src/test`

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possiblynotpotatoguy (2018-05-16 09:07:08)
Hey Team SuperWoman, your test plan is nice. So you're using JUnit and Selenium for testing, which is good. I just wanted to ask how you are planning to automate it? Best Regards Team react

superwomantinf16b4 (2018-05-16 09:15:27)
Hello Team React, thanks for your comment. Yes we will use JUnit and Selenium for testing. For automate the test we will use Jenkins, which runs the test after every commit. Best regards, Team SuperWoman

Team CCR (2018-05-16 09:41:03)
Hey Team SuperWoman, your test plan looks nice and using Jenkins as a tool for Continous Integration to automatically detect defective commits sounds like a good idea. Maybe you could include a link to your test code or a screenshot of the tests you implemented till now in your blog entry. The test cases don't have to be complete and run green, but it would be nice to be able to view your tests and the progress you make over time. Best regards, Team CCR

superwomantinf16b4 (2018-05-16 09:51:39)

Hello Team CCR, thank you for your comment. We only have a surface test of Cucumber so far. We can still link to them. So far we do not have Java classes, so JUnit testing was not yet possible. As soon as we are more advanced in our development we will add the appropriate JUnit tests. Best regards, Team SuperWoman

anaschwed (2018-05-16 10:12:38)

Dear Team SuperWoman, we think you created a nice test plan and described your testing in a clear and precise manner. Maybe you can add a screenshot of running tests and a link to your gradle configuration. Kind regards Team VSS

Final Presentation – Super Woman (2018-06-20 12:05:54)

[...] Week 12: Testing [...]

Refactoring (2018-05-21 20:00) - superwomantinf16b4

This week we dealt with the topic 'Refactoring'. For this purpose we have dealt with the first chapter of Martin Fowler's book "Refactoring: Improving the Design of Existing Code".

To understand and internalize the learned content, each of us has worked on their own git repository.
You can find our git repositories here:

- [1]Isa

- [2]Özen

- [3]Lea

Best regards,

Team SuperWoman

1. `https://github.com/ItalisaS/Fowler/commits/master`
2. `https://github.com/OezzyB/Refactoring/commits/master`
3. `https://github.com/Lea97/Refactoring/commits/master`

Jennifer Hauß (2018-05-23 08:50:05)
Hey Team Superwoman, Your Refactoring practise looks very well. You did a good job. You got a lot of commits what ist very good. I've got nothing to complain. Best regards Team Mix-It!

superwomantinf16b4 (2018-05-23 08:54:11)
Thank you very much! It is always good to hear that somebody likes you work and keeps on reading news about your project :) Best regards, Team SuperWoman

dennyfl (2018-05-23 09:08:55)
Hello Team SuperWoman, i like your work this week, seems like you really understood how refactoring works, at least on a small project :) I especially like that each of your repositories are slightly different, so you see that different people have different approaches for refactoring. But the result is the same :) best regards DFFC

superwomantinf16b4 (2018-05-23 09:26:17)
Hey DFFC, thank you for your feedback! Best regards, Team SuperWoman

c0d3d3v (2018-05-23 09:14:08)
Hey super woman :) Awesome!! Some of you not even needet the book :D and the others finished well the first chapter! would be great if you add some sreenshots of cool automatic refectoring functions!! How could you automaticly rename the variable each in the function private double amountFor(Rental each)? Did you use the https://www.codacy.com/ tool? Keep calm, Team VSS

possiblynotpotatoguy (2018-05-23 09:46:06)
Hey Team SuperWoman, your work is good. As your blog post. But your post would be better, if you linked directly at your github commits. Furthermore it would be interesting to see how your code performs on Codacy. Best Regards Team react

Design Patterns (2018-05-29 09:11) - **superwomantinf16b4**

Hello everyone,

this week we learned some things about design patterns. For more information about this topic you can look at the website about [1]patterns.

For our project we decided to use the "observer pattern". The reason why we choose this pattern is that it is the most useful for our project. In our game the elements are drawn over and over again. With the Observer Pattern it is possible to notify all objects by an event (in our case this event is the pressing of a button). With the notification the different elements of our game are induced to be updated. This means that they can be redrawn automatically if necessary.

We have all tried to integrate the Observer pattern into our project. But unfortunately we weren't successful.
We tried to create a new class for the pattern. You can find our experiments in this [2]branch. It is a bit confusing, as we have tried to implement different approaches from the Internet. If you can give us tips to help us fully integrate the pattern, we would be grateful if you could let us know.

But we integrated the framework AngularJS into our project as architectural design. AngularJS is a Client-Side JavaScript Framework from Google. It is used to build properly architectured and maintainable web applications. The most important advantage is that it uses the MVC-Pattern and therefore offers a separation of internal representations of information from the ways that information is presented to the user. It does it by implementing a controller which can perform a Two-Way-Data-Binding. The Two-Way-Data-Binding is a way to enable an automatic synchronization of data between the model and view components.
To sum it up you can see that AngularJS offers many benefits to us. By integrating it we could provide a separation of information and the presentation of it in the view. We are very happy with our choice to use this framework!

Have a nice week,

Your SuperWoman Team

1. `https://www.oodesign.com/`
2. `https://github.com/ItalisaS/SuperWoman/tree/Pattern`

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dennyfl (2018-05-29 10:00:24)
Hey Team SuperWoman, your blog post looks good, i like the background information on your pattern and why you use it and how it will help you :) From your explanation it seems your chosen pattern is very good for your project. I think it is worth investing some more time to get it to run, so you will have less problems in the future! best regards DFFC

superwomantinf16b4 (2018-05-29 10:14:38)
Thank you for your feedback :) We are still trying to figure out how we can implement the Observer Pattern and we hope that we can manage it!

anaschwed (2018-05-29 10:10:45)

Hi Team SuperWoman, we think you have a great idea to iintegrate the observer design pattern with your project and to update the elements automatically. To be honest, we took a look at your branch and were pretty confused too . Maybe you can add your class diagram to the post, so that we have a better overview and give you tips. Kind regards, Team VSS

Alexander Kimmig (2018-06-06 11:48:27)

Hey there, the idea of implementing the observer pattern for your project seems to be a good choice. I know that you were not able to fully implement the pattern yet, however i think that maybe you could just a screenshot of your experemental branch. And good job on implementing AngularJs ;) Greedings, Team Mix It

Alexander Kimmig (2018-06-06 11:58:22)

I meant an screenshot of the class diagram from the experemental branch. But i just realised that you can't create a class diagram for Java Script, so all good there ;) Greedings, Team Mix It

Final Presentation – Super Woman (2018-06-20 12:06:00)

[...] Week 14: Design Patterns [...]

2.3 June

Hello guys,

this week we learned about how to improve our code with metrics. So today we want to show you our metrics, which we decided to use.

Therefore we used the online tool Codacy, SonarQube and CodeClimate.

Our project consists of more JavaScript classes than Java classes. So we had the problem with SonarQube to check all of the code, because it wasn´t possible to read our JavaScript classes with the tool. In the picture below you can see the problems showed by SonarQube.

You can see that there were 2 bugs and 79 problems in code smells. After the refactoring we have only 55 problems and no bugs in the code smells.

Here you can see an example of a code snipped we have changed. In this example we combined the nested if statements.

```
62  -        if (!(driver.findElement(By.id("Name")).getAttribute(value).equals("")))
63  -        {
64  -            if (!(driver.findElement(By.id(email)).getAttribute(value).equals("")))
65  -            {
66  -                if (!(driver.findElement(By.id(pw)).getAttribute(value).equals("")))
67  -                {
68  -                    return true;
69  -                }
    49  +        if (!(driver.findElement(By.id("Name")).getAttribute(value).equals(""))) {
    50  +            if ((!(driver.findElement(By.id(email)).getAttribute(value).equals(""))
    51  +                && !(driver.findElement(By.id(pw)).getAttribute(value).equals("")))) {
    52  +                return true;
70  53                }
71  54            }
72  55            return false;
73  56        }
```

To check also the JavaScript-Code we used Codacy.

The main features of Codacy are:

- Code review automation.

- Code quality analytics.

- Security code analysis.

- Cluster installation/multiple instances.

Codacy uses the "per-commit strategy." You can see an overview of our commits on the website with the number of fixed and created issues.

In the following pictures you can see the state of the code before and after using metrics.

46
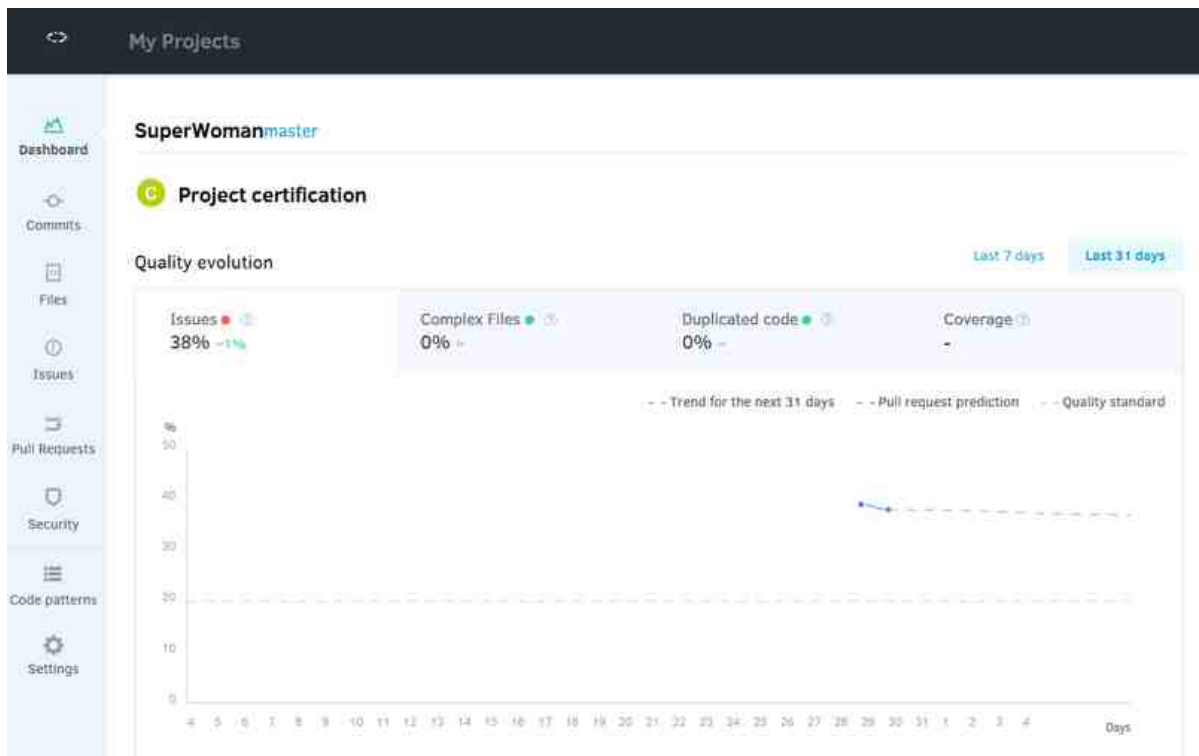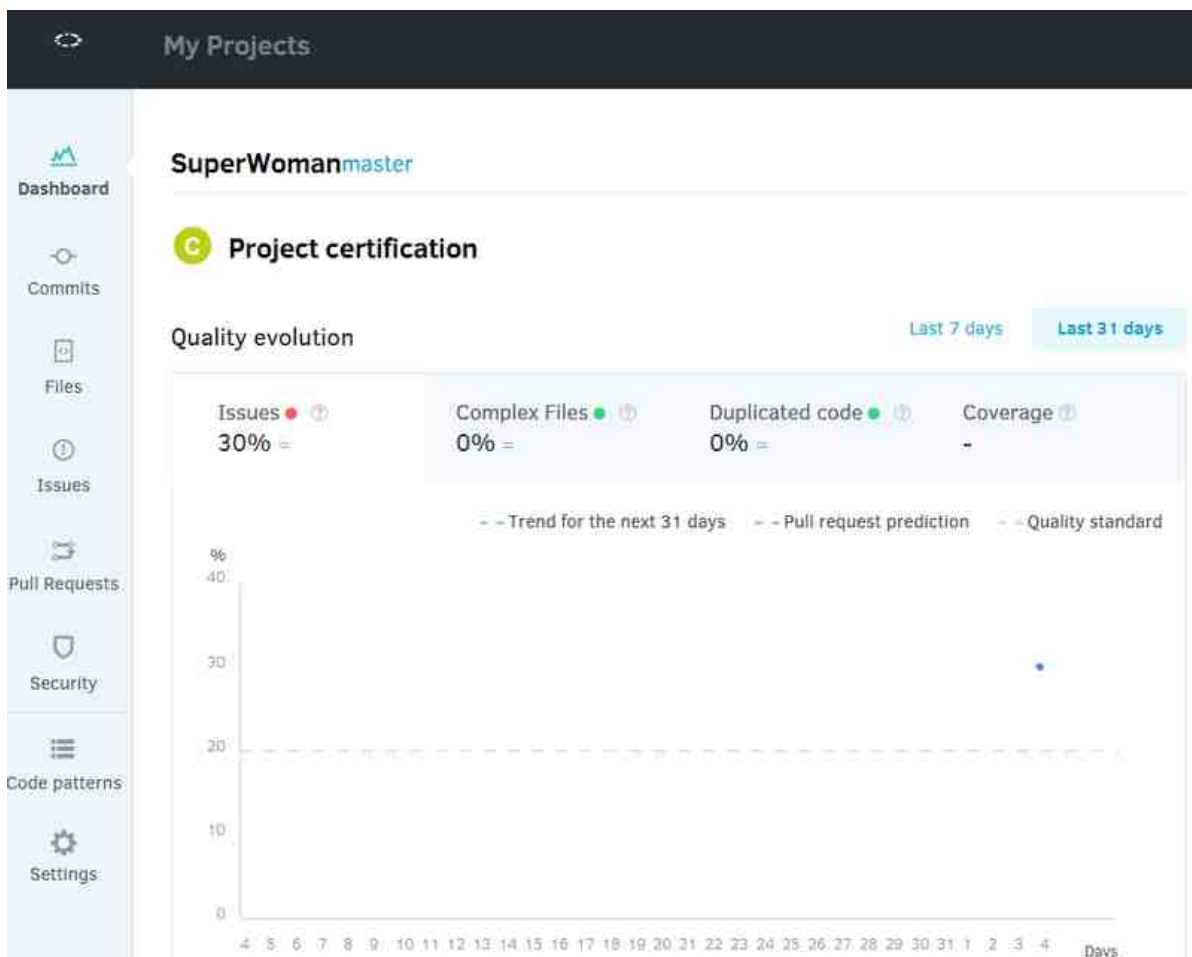
Before

After

You can see that we had 38 % problems in the issues before refactoring. After fixing them issues it is only 30 %.

Here is a code example where Codecy suggests us to work on and we decided to ignore the advices, since this affects the generated names of the CucumberTest and therefore renaming is not possible.

Both of the tools don´t recognize our cucumber test as tests, so our code coverage is 0 %. But we try to

fix this problem.

Here you can see which metrics we have used:

Code Duplication

Code Duplication is being tested by CodeClimate. We have decided to use a third tool to cover another metrics.

Duplicated code can lead to software that is hard to understand and difficult to change. The Don't Repeat Yourself (DRY) principle states:

> Every piece of knowledge must have a single, unambiguous, authoritative representation within a system.

When you violate DRY, bugs and maintenance problems are sure to follow. Duplicated code has a tendency to both continue to replicate and also to diverge (leaving bugs as two similar implementations differ in subtle ways).

Cognitive Complexity

SonarQube describes cognitive complexity as following: "Cognitive Complexity offers a new measurement of how hard code is to understand - one that strikes developers as intuitively right."

In more details Cognitive Complexity is a measure of how difficult a unit of code is to intuitively understand. Unlike Cyclomatic Complexity, which determines how difficult your code will be to test, Cognitive Complexity tells you how difficult your code will be to read and comprehend.

Best regards,

Team SuperWoman

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dennyfl (2018-06-06 09:44:09)
Hey SuperWoman, good SonarQube helped you find those evil bugs and you could remove them. I always think it would be interesting if you see some code examples of the bad code and then you give another screenshot of the fixed code. This way people learn better about code issues and how to fix them. best regards DFFC

superwomantinf16b4 (2018-06-06 10:24:10)
Hello Team DFFC, thank you for your comment. We have put an example of code to show the refactoring on it.

necoproject (2018-06-06 10:14:11)
Hi team SuperWoman, I realy like your blog post. You explained everything quite well and also used two tools for fixing your problem with Java Script. It would be great, if you explain more detailed, which two metrics you used, as I didn't find that information in your blogpost. Kind regards, Team NeCo

superwomantinf16b4 (2018-06-06 11:24:12)
Hi team Neco, thank you for your feedback! We added a paragraph about the two metrics we used. Best regards, Team SuperWoman

possiblynotpotatoguy (2018-06-13 21:17:26)
Hey team SuperWoman, you did great work. It is great to see your progress. I just wanted to ask if you did use the SonarJS Plugin for SonarQube. Best Regards Team react

Final Presentation – Super Woman (2018-06-20 12:06:03)
[...] Week 15: Metrics [...]

Installation (2018-06-20 11:57) - superwomantinf16b4

Hello guys,

the first version of our project is playable. You can reach our website online via [1]superwoman.cf/Website/.

If you want to see our code you can find it in our GitHub project [2]here.
If you want to run the project locally you just have to clone the GitRepo and run the index.html file on a server.

Best regards,
Team SuperWoman

1. `https://superwoman.cf/Website/`
2. `https://github.com/ItalisaS/SuperWoman`

Final Presentation – Super Woman (2018-06-20 12:06:06)
[...] Week 16: Installation [...]

Final Presentation (2018-06-20 12:05) - superwomantinf16b4

Hello everyone! ▯

In this blog post we want to sum up all the work we did.

Here you can find a list of the weeks we spent working on our project. Each week is linked to a blog post, which contains all the useful information for the corresponding topic. Here you can also find a link to the [1]Software Requirement Specification, [2]TestPlan and the [3]Software Architecture Document.

- Week 1: [4]Our Project

- Week 2: [5]Team & Technology

- Week 3:[6] Requirements & Use Cases

- Week 4: [7]Use Cases

- Week 5: [8]First Scrum

- Week 6: [9]Gherkin-Feature files

- Week 7:[10] Class Diagram

- Week 8:[11] Software Architecture Document

- Week 9:[12] Gantt Chart

- Week 10: [13]Risk Management

- Week 11: [14]Function Point Estimation

- Week 12: [15]Testing

- Week 13: [16]Refactoring

- Week 14: [17]Design Patterns

- Week 15: [18]Metrics

- Week 16: [19]Installation

You can also see our final presentation [20]here if you want to see an overview.

Thank you for reading our blog and for helping us with your feedback in your comments every week. Don't hesitate asking us questions and leaving us a comment!

1. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/SoftwareRequirementsSpecification.pdf
2. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/Test_Plan_SuperWoman.pdf
3. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/SoftwareArchitectureDocument.pdf
4. https://superwoman2017blog.wordpress.com/2017/10/05/erster-blogbeitrag/
5. https://superwoman2017blog.wordpress.com/2017/10/12/team-technology/
6. https://superwoman2017blog.wordpress.com/2017/10/19/requirements-user-cases/
7. https://superwoman2017blog.wordpress.com/2017/10/29/use-cases/
8. https://superwoman2017blog.wordpress.com/2017/11/08/first-scrum/
9. https://superwoman2017blog.wordpress.com/2017/11/13/gherkin-feature-files/

10. https://superwoman2017blog.wordpress.com/2017/11/22/140/
11. https://superwoman2017blog.wordpress.com/2017/11/23/software-architecture-document/
12. https://superwoman2017blog.wordpress.com/2017/12/07/gantt-chart/
13. https://superwoman2017blog.wordpress.com/2018/04/11/risk-management/
14. https://superwoman2017blog.wordpress.com/2018/05/01/function-point-estimation/
15. https://superwoman2017blog.wordpress.com/2018/05/15/testing/
16. https://superwoman2017blog.wordpress.com/2018/05/21/refactoring/
17. https://superwoman2017blog.wordpress.com/2018/05/29/design-patterns/
18. https://superwoman2017blog.wordpress.com/2018/06/06/metrics/
19. https://superwoman2017blog.wordpress.com/2018/06/20/installation/
20. https://github.com/ItalisaS/SuperWoman/blob/master/Docs/FinalPresentation.pdf