Interactive Schedule Planer

1st Milestone
May 16th 2024

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1. Overview

- Task definition: Our project is to create a „Web-Based Interactive Schedule Planner for Lectures and Exams".

- Topic: „Each semester the appointments for lectures, exercise classes and exams need to be planned." „Therefore, a graphical tool is needed that visualizes the current schedule, allows to change it by dragging events to a new place and highlights possible conflicts."

2. Management

- Team: Seyyed Mostafa Rahimi, Alexander Harry, Michael Gilge

- Development process: Modified Scrum

- Distribution of tasks (roles)
  – Protocol writer → Michael
  – Record iterations → Michael
  – Gitlab repository → Alexander
  – Product owner → Alexander
  – Scrum master → Michael
  – Scrum team → All (as we are only 3)

3. Implementation

- Technical framework conditions
  - Browser based (without server)
  - React
  - Material UI
  - HTML 5 local storage
  - Typescript or Javascript
  - Node Package Manager for the build configuration
  - Gitlab Page as host

- Previous requirements: Set up the project organization, estimations & plans

4.0 Planning - Time - Availability

Availability Planning & Schedule			minus orga time				
			1				
Michael	15	h per week	14				
Alexander	15	h per week	14				
Mostafa	15	h per week	14				
					Hours	Needed weeks	Date
Sum	42	h per week			992	24	27.10.2024
All according to credits	30	h per week			1080	36	22.01.2025
All according to credits	45	h per week			1080	24	30.10.2024
2nd Milestone		27.06.2024					
3rd Milestone		29.08.2024					
4th Milestone		31.10.2024					
Acceptance Meeting		06.11.2024					

4.1 Planning - Time - Overview

Until 2nd Milestone - 27.6.2024

– Learn about React and all the other technical neccessities

– Experiment generating a web site

– Minimal viable product:

      - Implement calendar view

      - Implement drag and drop of events

      - Download schedule

      - Upload schedule

Until 3rd Milestone - 29.8.2024

– Near to complete functionality of storage & retrieval

– Near to complete functionality of organizing events

Until 4th Milestone - 31.10.2024

– Calculation of conflicts

– Highlighting conflicts

Until Acceptance Meeting - 6.11.2024

– Make final report from partly reports.

4.2 Planning - Time - 2nd Milestone

Prioritiy	Requirement	Estimated hours	Alexander	Michael	Mostafa	∑ Hours	Weeks	Date	Start date
1	Using Gitlab Page as host.	24	8	8	8	24	1	19.05.2024	15.05.2024
2	Using Node Package Manager for the build configuration.	20	8	8	4	44	1	22.05.2024	
3	Using React.	20	8	8	4	64	2	25.05.2024	
4	Using Material UI.	20	8	8	4	84	2	29.05.2024	
5	The current planning should be stored in the HTML 5 loca	24	8	8	8	108	3	02.06.2024	
6	Using Typescript or Javascript.	20	8	8	4	128	3	05.06.2024	
7	The application shall be browser based (without a server).	24	8	8	8	152	4	09.06.2024	
7	CSS	16	6	6	4	168	CSS	12.06.2024	
8	2.0.0 Landing Page	20				188	4	15.06.2024	
20	2.3.1 Creating an Appointment via button	20				208	5	18.06.2024	
21	2.3.2 Creating an Appointment via double click	20				228	5	22.06.2024	
22	2.3.3 Editing Appointment	15				243	6	24.06.2024	
23	2.3.4 Moving Appointment per Drag & Drop	20				263	6	27.06.2024	
24	2.3.5 Deleting Appointment	12				275	7	29.06.2024	
25	2.3.6 Deleting All Appointments	10				285	7	01.07.2024	
30	2.2.1 Downloading File	20				305	7	04.07.2024	
31	2.1.1 Uploading File per Drag & Drop	30				335	8	09.07.2024	
32	2.1.2 Uploading File per File Selection	20 after 2.1.1				355	8	13.07.2024	2nd milestone
50	2.100.0 It should be nice and intuitive	10				365	9	14.07.2024	27.06.2024

4.3 Planning - Time - 3rd Milestone

3.0.0 Landing Page / Welcome View	4				369	9	15.07.2024	
3.0.1 Start from Scratch	4				373	9	16.07.2024	
3.0.2 Return to Welcome View	4				377	9	16.07.2024	
3.3.1 Create Course	16				393	9	19.07.2024	
3.1.1 Uploading File per Drag & Drop	10				403	10	21.07.2024	
3.1.2 Uploading File per File Selection	10				413	10	22.07.2024	
3.1.3 Uploading initial schedule	25				438	10	27.07.2024	
3.2.1 Downloading File	20				458	11	30.07.2024	
3.2.2 Human Readable Form	20				478	11	02.08.2024	
3.2.20 Saving Calendar	16				494	12	05.08.2024	
3.2.21 Choosing Auto Save Folder	10				504	12	07.08.2024	
3.2.22 Delete Old Auto Saved Files	6				510	12	08.08.2024	
3.3.0 Define Lecture and Exam Periods	12				522	12	10.08.2024	
3.5.0 Change Mode	16				538	13	12.08.2024	
3.10.1 Recording changes	22				560	13	16.08.2024	
3.0.1 It should be intuitive.	10				570	14	18.08.2024	
3.80.1 Go To Date	20				590	14	21.08.2024	
3.80.2 Select Number of Weeks	20				610	15	24.08.2024	
3.80.3 Filter	40				650	15	31.08.2024	3rd milestone
3.222.2 Unforseen Issues	30				680	16	05.09.2024	29.08.2024

4.4 Planning - Time - 4th Milestone

4.10.0 Study Plans	10			690	16	07.09.2024	
4.10.1 Create Study Plan	25			715	17	11.09.2024	
4.10.2 Edit Study Plan	7			722	17	12.09.2024	
4.10.3 Delete Study Plan	3			725	17	12.09.2024	
4.10.4 Download Study Plans	16			741	18	15.09.2024	
4.10.5 Upload Study Plans	16			757	18	18.09.2024	
4.2.1 Downloading File	5			762	18	19.09.2024	
4.2.2 Human Readable Form	5			767	18	19.09.2024	
4.2.20 Saving Calendar	5			772	18	20.09.2024	
4.20.0 Lecturers	4			776	18	21.09.2024	
4.20.1 Lecturers Collection	4			780	19	22.09.2024	
4.20.2 Lecturers Download	4			784	19	22.09.2024	
4.20.3 Lecturers Conflict Analysis	25			809	19	26.09.2024	
4.10.6 Study Plan Conflict Analysis	80			889	21	10.10.2024	
4.1.1 Show Conflicts	40			929	22	16.10.2024	
4.3.0 Create Course	4			933	22	17.10.2024	
4.3.1 Creating an Appointment via button	2			935	22	17.10.2024	
4.3.2 Creating an Appointment via double click	1			936	22	18.10.2024	
4.3.3 Editing Appointment	2			938	22	18.10.2024	
4.3.4 Moving Appointment per Drag & Drop	1			939	22	18.10.2024	
4.3.5 Deleting Appointment	1			940	22	18.10.2024	
4.3.6 Deleting All Appointments	2			942	22	19.10.2024	
4.1.1 Uploading File per Drag & Drop	10			952	23	20.10.2024	
4.1.2 Uploading File per File Selection	10			962	23	22.10.2024	4th milestone
4.222.2 Unforseen Issues	30			992	24	27.10.2024	31.10.2024

4. Planning - Risks

- Not being ready in time (likely, not serious, features can be left out)
  - Solution: Keep track of efforts and time. Adjust as needed.
  - Solution: Work on it longer.
- Sickness or someone leaving (unlikely, serious)
  - Solution: All should know about all of the project.
  - Solution: Good documentation
- Program not working in every browser (unlikely, not serious, as for one user)
  - Solution: Test on several browsers: Firefox, Safari, Chrome, Opera
- Interaction does not work on every operating system (likely, not serious, as for one user)
  - Solution: Test on MacOs, Linux, Windows
- Data format not suitable for upload (unlikely, serious)
  - Solution: Write adaptor
  - Final solution: Decide on own format
- Data incomplete or changed (likely, serious)
  - Solution: Show problems and allow adjustments in browser
- Contingency plan: Keep all stakeholders informed.

4. Planning – Quality Assurance

- Testing
  - Use different computers and browsers
  - Test with real data.
  - Unit-, process-, functionality-, components-, integration-, system-tests
  - When: As soon as possible, especially before commits and with every push.
  - Coverage / granularity: Every code line. All functionalities
  - Document tests in detail, so that others can repeat it.
- Debugging
- Should be fast
- Should be save -> regular savings
- Should work smoothly without disruptions
- Include user documentation in web page: One help page, Tooltips with maximum one sentence.

5. Goals until the next milestone

Until 2nd Milestone

- Inform about React and all the other technical necessities

- Experiment generating a website with React

- Minimal viable product:

      - Implement calendar view

      - Implement drag and drop of events

      - Download schedule

      - Upload schedule