



SWE30010

HRM PROPOSAL FOR GEMADEPT

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Evidence

1. Work Burndown Chart

A burndown chart to keep track of the days it should take in order for the sprint to be completed. It is important to note that this chart represent the total effort for all the sprint product in sprint one and not particularly any sprint product.

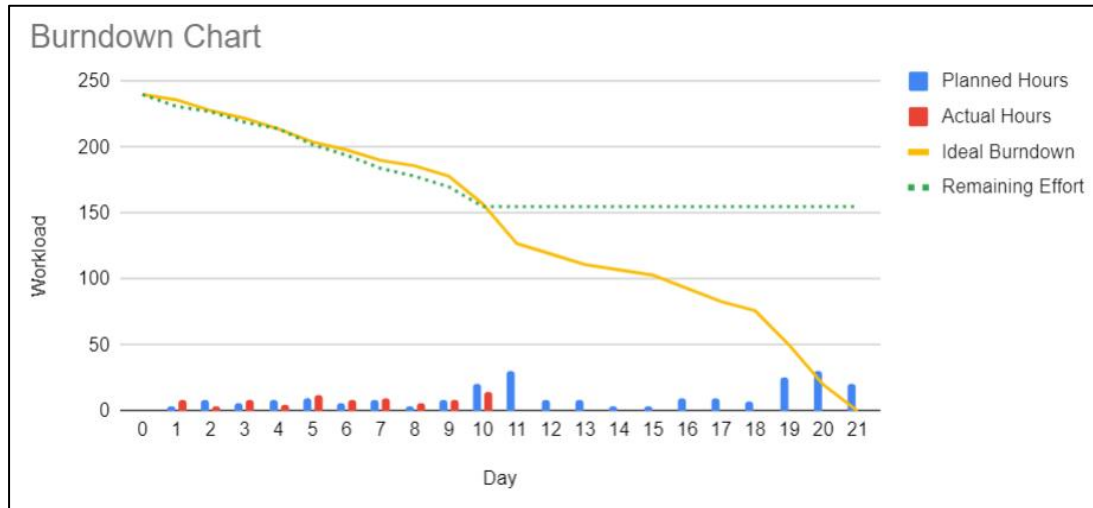


Figure 1.1: Sprint 1 burndown chart

Sprint 1						
Day	Burned Down		Balance		Daily Completed	
	Estimate	Actual	Estimate	Actual		
0	0	0	0	240	240	0
1	4	9	236	231		9
2	8	4	228	227		4
3	6	8	222	219		8
4	8	5	214	214		5
5	10	12	204	202		12
6	6	8	198	194		8
7	8	10	190	184		10
8	4	6	186	178		6
9	8	8	178	170		8
10	21	15	157	155		15
11	30		127	155		
12	8		119	155		
13	8		111	155		
14	4		107	155		
15	4		103	155		
16	10		93	155		
17	10		83	155		
18	7		76	155		
19	26		50	155		
20	30		20	155		
21	20		0	155		

Figure 1.2: Sprint 1 burndown table

2. Work Breakdown Structure

We created a WBS chart to estimate the effort it would take to develop the base website for our project. Other sprint products are merely features or design for our website, hence we put our focus on analyzing this particular product.

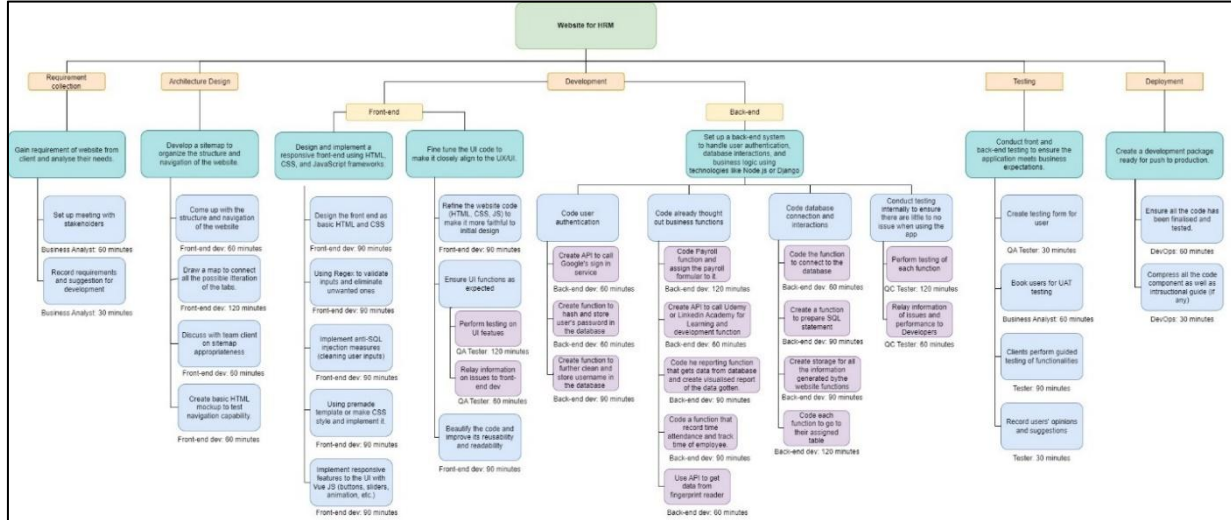


Figure 2.1: WBS Chart with Time Estimation for each task

3. Website building – Front end and Back end

Per inquiry with our developer, he spent 40 hours (which amount to 4 hours per day) on the website's backend and front end, he also recorded all of his work on Github for ease of review.

Front end Github:

Commits on Mar 23, 2024	
Update EmployeeLayout.vue HaileInnoTech committed 5 days ago ✓ 1 / 1	dd98c7e
Commits on Mar 22, 2024	
Update Payroll.vue HaileInnoTech committed last week ✓ 1 / 1	b81fb00
Add more bugs, and fix some bugs HaileInnoTech committed last week ✓ 1 / 1	c2c4205
Add more bug to fix later. Update Author, Authen for role admin, add form for create new account. HaileInnoTech committed last week ✓ 1 / 1	9e8754a
Commits on Mar 20, 2024	
Update payroll component HaileInnoTech committed last week ✓ 1 / 1	a520228
Update router Update design HaileInnoTech committed last week ✓ 1 / 1	995bbae

Commits on Mar 19, 2024		
Create vercel.json	HailElNoTech committed last week - ✓ 1 / 1	7f6be22
Update Login.vue	HailElNoTech committed last week - ✓ 1 / 1	bfa1194
Production	HailElNoTech committed last week - ✓ 1 / 1	b1bf6b4
Update chart, filter, backlog	HailElNoTech committed last week	640ee53
Commits on Mar 18, 2024		
Update employee data view	HailElNoTech committed 2 weeks ago	616769d
Update Pagination for employee list	HailElNoTech committed 2 weeks ago	09d0161
Commits on Mar 17, 2024		
Update render list of employees	HailElNoTech committed 2 weeks ago	0bacf1e
Commits on Mar 13, 2024		
Update Mainpage based on sketch	HailElNoTech committed 2 weeks ago	07b5ecc
Add Horizontal navigation header	HailElNoTech committed 2 weeks ago	5a45147
Commits on Mar 12, 2024		
Add login page template	HailElNoTech committed 2 weeks ago	384ed9e
Commits on Mar 6, 2024		
Initial commit	HailElNoTech committed 3 weeks ago	37dcb27

Figure 3.1, 3.2, 3.3: Front-end Github commits

Back end Github:

Commits on Mar 22, 2024		
Update request.rest	HailElNoTech committed last week	118924f
Update index.js	HailElNoTech committed last week	39e96c9
Fix and improve	HailElNoTech committed last week	059ec5c

Commits on Mar 21, 2024		
Update author, authen	HaileInnoTech committed last week	afae6c6
Commits on Mar 20, 2024		
Update index.js	HaileInnoTech committed last week	56e93bf
Commits on Mar 19, 2024		
Update index.js	HaileInnoTech committed last week	c4e387b
test	HaileInnoTech committed last week	37dd269
Commits on Mar 16, 2024		
Update api to set bonus by employee email	HaileInnoTech committed 2 weeks ago	43c0429
Update API for employee Salary by Email	HaileInnoTech committed 2 weeks ago	4f6144f
Commits on Mar 13, 2024		
Update api get employee data by email	HaileInnoTech committed 2 weeks ago	9a0f1e4
Update api get attendance by email	HaileInnoTech committed 2 weeks ago	b378d0b
Update api get total attendance	HaileInnoTech committed 2 weeks ago	dcbd0ae
Update api get Employee Data	HaileInnoTech committed 2 weeks ago	069351b
Setup environment for API	HaileInnoTech committed 2 weeks ago	3fbbc32
Commits on Mar 6, 2024		
Initial commit	HaileInnoTech committed 3 weeks ago	edf1b74

Figure 3.4, 3.5, 3.6: Back-end Github commits

As can be seen, he was able to push a number of commits on the dates that is parallel to the 9 dates he was able to work on the project. There is a lack of 1 commit on both he front and the back end which equals to 1 date, but it is due to the fact that some of the packages that should have been a separate commit, were collectively pushed into 1 commit.

4. Rationale and Analysis

We devise a product backlog that defined 4 sprints for our project, each sprint would be as long as 21 days, and the total work hour it would take for each of the them is 240 hours (about 3 hours per day for 4 person). In our first project sprint, we have got four tasks to tackle, building the website is the main focus and will likely be the most lengthy.

As of the moment, our team had finished the first 10 days of the sprint, so we reached the halfway milestone of our project. According to our burn down table and chart, we should have worked on the entire project at least 83 hour at this point and looking at the work breakdown structure, building the website will take around 44.5 hours in total, and since we had defined the website as the utmost important product in our plan, we put a lot more effort in to finishing that product first.

Given the predicted 44.5 hours needed for it in total, we were able to work on this website for 40 hours, give or take. This is within the 10% error margin of our project, as we have not yet completed the additional testing duty. Thus, of the 85 hours that we really worked on the sprint, the website consumes almost half of our time, leaving us with 45 hours to concentrate on the other three products.

Completing the website we had envisioned seemed like a great accomplishment, especially considering the amount of time and work that goes into establishing a website or software. It resembles demolishing a massive wall. The foundation for future feature additions is established by the essential functionality of this website.

In order to get ready for the upcoming sprint, we took some time to evaluate our performance from the previous one and determine how we were able to achieve a narrow margin of error. We found a few key components that truly helped us accomplish our goal of finishing the website in the allocated amount of time:

- **Consulting with Professionals:** Although the term "professionals" can be a bit wide, we tried to interact with people who might offer insightful information on the intricacies of creating a website (such as YouTube teachers, peers who have done a lot of web development, etc.). We felt that by getting outside advice, we were able to increase the precision of our estimates and gain a deeper understanding of the work needed for each component.
- **Leveraging past experiences:** Since every member of our team had studied web development and was aware of its complexity, we were able to analyze past data to find trends and patterns in the amount of time it took to complete tasks. It proved to be quite beneficial for us in terms of project planning.

- **Prioritize Important Tasks:** We eat the frog and complete the most important functions of our website first (e.g., database, payroll, handling user's data, etc.), this allow us to do the smaller tasks later and not be too overwhelmed with the amount of work ahead, effectively make our processes more efficient.
- **Regular Meeting:** We held frequent refinement sessions prior to sprint planning because we believed in checking in with one another. This allowed us to review and reevaluate our initial estimations and gain insight into the work progress of other team members. By means of cooperative deliberations and input from fellow team members, we can enhance our approximations, accommodate new insights or modifications in specifications, and ensure compliance with team capabilities..

We believed that accuracy achieved in our project's progress stems from a combination of planning, prioritization of critical tasks, and adaptability to changing circumstances. By leveraging these strengths and remaining agile in our approach, we are well-positioned for continued success in future sprints and beyond.