PM Activities

Project 3: Building an Autograding Question System using PrairieLearn

University of British Columbia Okanagan

COSC 499 - Summer 2022

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1. Time Estimates vs Actuals

1.1 Emiel van der Poel

- Time Estimates (12 Weeks)
  - Total: **210.5** Hours.
  - Weekly Average: **17.5** Hours.
- Time Actual (9.5 Weeks)
  - Total: **203** Hours.
  - Weekly Average: **21.4** Hours.

1.2 Luis Lucio

- Time Estimates (12 Weeks)
  - Total: **177.5** Hours.
  - Weekly Average: **14.75** Hours.
- Time Actual (9.5 Weeks)
  - Total: **117** Hours.
  - Weekly Average: **12.32** Hours.

1.3 Prajeet Didden

- Time Estimates (12 Weeks)
  - Total: **206** Hours.
  - Weekly Average: **17** Hours.
- Time Actual (9.5 Weeks)
  - Total: **168** Hours.
  - Weekly Average: **17.7** Hours.

1.4 Siqiao Yuan

- Time Estimates (12 Weeks)
  - Total: **174.5** Hours.
  - Weekly Average: **14.5** Hours.
- Time Actual (9.5 Weeks)
  - Total: **94.5** Hours.
  - Weekly Average: **9.95** Hours.

1.5 Team

- Time Estimates (12 Weeks)
  - Total: **768** Hours.
  - Weekly Average: **63** Hours.
- Time Actual (9.5 Weeks)
  - Total: **582.75** Hours.
  - Weekly Average: **61.34** Hours.

1.6 Weekly Time Breakdown

| Week	Emiel	Prajeet	Luis	Siqiao	Weekly Estimate	Weekly Total
1	13:21	13:51	6:55	3:41	**63.75**	**37.8**
2	20:09	18:28	14:36	8:42	**63.75**	**62.0**
3	16:59	13:56	7:02	4:30	**63.75**	**42.5**
4	19:54	28:26	18:24	11:21	**63.75**	**78.1**
5	35:49	22:06	19:03	19:22	**63.75**	**96.4**
6	22:48	24:59	14:38	22:13	**63.75**	**84.6**
7	17:24	22:34	13:46	21:37	**63.75**	**75.4**
8	19:39	6:41	12:46	3:00	**63.75**	**42.1**
9	27:49	11:39	3:26	0:00	**63.75**	**42.9**
9.25	7:03	5:27	5:39	0:00	**15.94**	**18.15**
Total	**203**	**168**	**117**	**94.5**	**605.65**	**582.75**

2. Burn-up/Burn-down

2.1 Burn-up
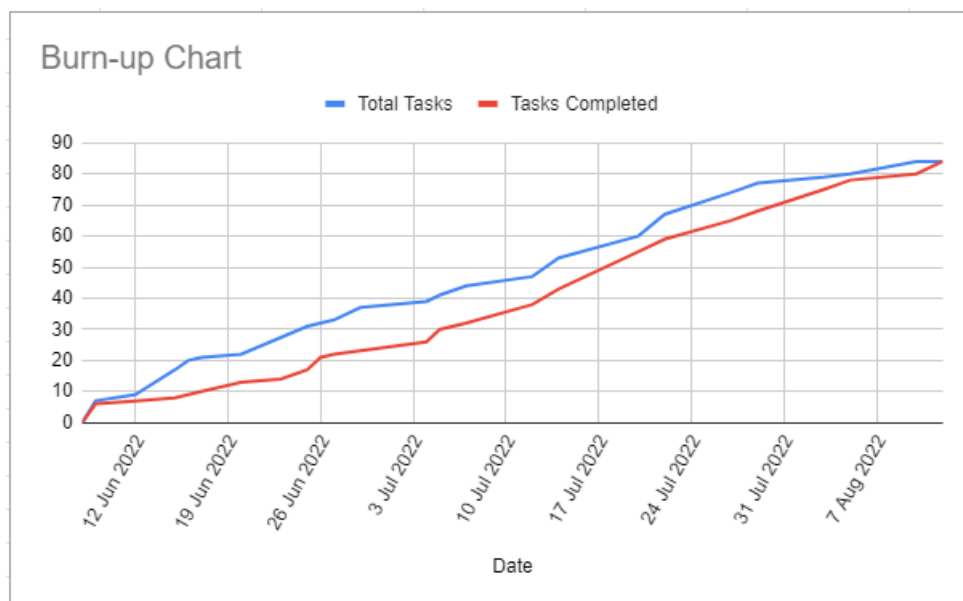
Figure 1: *Overall Project Burn-up Chart.*

From this burn-up chart we are able to see that we maintained a good flow throughout the project. We rarely had plateaus and minimal spikes to maintain a constant flow(Figure 1).

2.2 Burn-down

Figure 2: *Overall Project Burn-down Chart*

From this burn-down chart we are able to see that we hovered around the ideal time line. There were moments where we were lacking behind on the project but swiftly caught back up and completed the project ahead of schedule. This is because we had an earlier deadline set by the client to deploy a viable product well before the end of the project (Figure 2).

3. Main Features Completed

Feature	Who Completed	Hours
Dockerize PrairieLearn	Prajeet, Emiel	**~53 Hours**
Import ER question	Prajeet, Emiel	**~62 Hours**
Convert Frontend rendering to Mermaid.js	Prajeet	**8 Hours**
DroneIO Implementation	Emiel, Luis	**10 Hours**
Added Testing to Autograder and Autogeneration Scripts	Luis, Siqiao	**60 Hours**
Added instructor ability to create visual answers and convert to text representation.	Emiel	**8 Hours**
Added Ability to Set Custom Grading Schema	Prajeet, Emiel	**4 Hours**
Created Custom Course to be Used for Deployment	Emiel	**8 Hours**
PrairieLearn Deployment	Prajeet, Emiel	**~55 Hours**
Convert ER question into Custom PrairieLearn Element	Prajeet	**18 Hours**
Added optional tags to modify Custom Element	Prajeet, Emiel	**8 Hours**
Set up Google Oauth authentication	Prajeet	**16 Hours**
Setup outside postgres database	Prajeet	**6 Hours**
Create question/answer persistency for student submissions	Prajeet	**6 Hours**
Merge production code and documentation to PrairieLearn codebase	Prajeet	**22 Hours**
Research implementing the RelaX relational algebra editor as a question type	Luis	**23 hours**