Estimate of Person-Hour Methodology, P2

Early in our project, our team established a reference story as our foundation to provide a basis for our time estimates. Instead of using a spike story, which might have introduced uncertainty due to its non-technical nature, we selected a small, technical, and well-defined piece of work that was simple to implement. This became our model/reference for all further estimation.
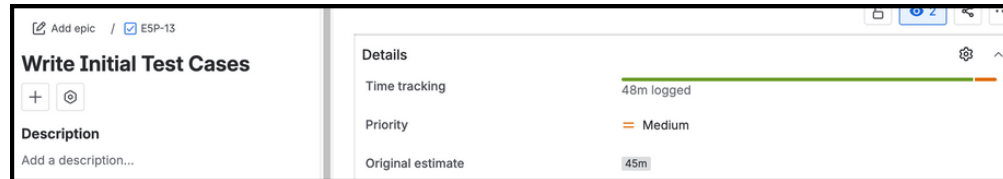

Figure 1: Jira Ticket for Reference Story

Figure 2: Initial Test Case Implementation in Code

The reference story was documented as a ticket (Figure 1) with an estimated length of 45 minutes. The implementation was in code (Figure 2). Because the ticket was simple and quantifiable, it gave us confidence to use it as a standard measuring stick for all other stories.

From then on, every new story we created was time-estimated against this baseline. As an example, if a new story looked to be twice as complex as the baseline, we would estimate it at around 90 minutes. If it was half as complex, we would estimate in the range of 20 minutes. This estimating technique was in line with agile techniques and served to be helpful in giving team consistency.

In addition to the baseline reference, we also used our previous implementation experience and spike research. This provided additional context when evaluating stories that were less familiar or had more unknowns. Combining these two variables, relative estimation against a known base and knowledge from prior experience, enabled us to generate estimates that were reasonable and understandable.

Project: EECS 581 Project 2

T	Ticket Key	Summary	Assignee	Reporter	Status	Created Date	Completed Date	Original Estimate	Actual Time Spent
☑	E5P2-39	Add needed prologue comments	Jack Bauer	Jack Bauer	DONE	04/Oct/25	04/Oct/25	15 minutes	30 minutes
☑	E5P2-38	Add prologue + comments for ai.py	Blake Carlson	Blake Carlson	DONE	04/Oct/25	04/Oct/25	45 minutes	1 hour, 30 minutes
☑	E5P2-37	Fix small SFX crash regression	Jack Bauer	Jack Bauer	DONE	02/Oct/25	02/Oct/25	15 minutes	10 minutes
☑	E5P2-36	Add mute button + now playing	Delroy Wright	Delroy Wright	DONE	02/Oct/25	02/Oct/25	1 hour	1 hour, 15 minutes
☑	E5P2-35	Make dark-light mode toggle	Nifemi Lawal	Nifemi Lawal	DONE	02/Oct/25	02/Oct/25	1 hour	3 hours
☑	E5P2-34	Fix Program Stalling in Medium AI Mode	Blake Carlson	Blake Carlson	DONE	02/Oct/25	02/Oct/25	45 minutes	1 hour, 15 minutes
☑	E5P2-33	Fix AI Medium Difficulty	Blake Carlson	Blake Carlson	DONE	01/Oct/25	02/Oct/25	1 hour, 30 minutes	2 hours, 30 minutes
☑	E5P2-32	Display Whose Turn (AI mode)	Jack Bauer	Logan Smith	DONE	01/Oct/25	02/Oct/25	30 minutes	15 minutes
☑	E5P2-31	Fix game loop input blocking	Jack Bauer	Jack Bauer	DONE	01/Oct/25	01/Oct/25	1 hour, 30 minutes	1 hour
☑	E5P2-30	Solve SFX init failure bug	Jack Bauer	Jack Bauer	DONE	01/Oct/25	01/Oct/25	1 hour	20 minutes

T	Ticket Key	Summary	Assignee	Reporter	Status	Created Date	Completed Date	Original Estimate	Actual Time Spent
☑	E5P2-29	Display AI game mode on playing screen - NOT IMPLEMENTED	Jack Bauer	Nifemi Lawal	DONE	01/Oct/25	02/Oct/25	45 minutes	10 minutes
☑	E5P2-28	Make AI Solver Class	Blake Carlson	Blake Carlson	DONE	30/Sep/25	02/Oct/25	30 minutes	45 minutes
☑	E5P2-27	Get Difficulty linked to AI	Logan Smith	Logan Smith	DONE	30/Sep/25	01/Oct/25	2 hours	2 hours
☑	E5P2-26	Investigate sfx inconsistencey bug	Delroy Wright	Delroy Wright	DONE	30/Sep/25	02/Oct/25	30 minutes	30 minutes
☑	E5P2-25	Create High Score Functionality	Nifemi Lawal	Nifemi Lawal	DONE	30/Sep/25	30/Sep/25	40 minutes	1 hour
☑	E5P2-24	Manual player-only mode	Jack Bauer	Jack Bauer	DONE	29/Sep/25	01/Oct/25	1 hour	10 minutes
☑	E5P2-23	Add backdrop for win/loss screen	Nifemi Lawal	Nifemi Lawal	DONE	29/Sep/25	29/Sep/25	45 minutes	1 hour, 25 minutes
☑	E5P2-22	Update architecture docs to include AI, custom features & UML diagram	Logan Smith	Jack Bauer	DONE	29/Sep/25	05/Oct/25	1 hour	1 hour
☑	E5P2-21	Person hours actual & estimate	Nifemi Lawal	Jack Bauer	DONE	29/Sep/25	05/Oct/25	30 minutes	20 minutes
☑	E5P2-20	Add game timer	Nifemi Lawal	Nifemi Lawal	DONE	29/Sep/25	30/Sep/25	2 hours	3 hours
☑	E5P2-19	Add SFX	Delroy Wright	Delroy Wright	DONE	29/Sep/25	02/Oct/25	2 hours	3 hours

T	Ticket Key	Summary	Assignee	Reporter	Status	Created Date	Completed Date	Original Estimate	Actual Time Spent
☑	E5P2-18	Make archive branch	Jack Bauer	Jack Bauer	DONE	28/Sep/25	28/Sep/25	10 minutes	5 minutes
☑	E5P2-17	Difficulty selection menu	Jack Bauer	Jack Bauer	DONE	28/Sep/25	28/Sep/25	1 hour	1 hour, 1 minute
☑	E5P2-16	UML Diagram for custom addition	Logan Smith	Jack Bauer	DONE	28/Sep/25	30/Sep/25	1 hour	1 hour
☑	E5P2-15	AI Hard Difficulty	Blake Carlson	Jack Bauer	DONE	28/Sep/25	01/Oct/25	1 hour	1 hour
☑	E5P2-14	AI Medium Difficulty	Blake Carlson	Jack Bauer	DONE	28/Sep/25	01/Oct/25	3 hours	3 hours, 30 minutes
☑	E5P2-13	AI Easy difficulty	Blake Carlson	Jack Bauer	DONE	28/Sep/25	01/Oct/25	1 hour	45 minutes
☑	E5P2-12	Automatic AI mode	Logan Smith	Jack Bauer	DONE	28/Sep/25	01/Oct/25	1 hour	1 hour
☑	E5P2-11	Interactive mode	Logan Smith	Jack Bauer	DONE	28/Sep/25	01/Oct/25	1 hour	1 hour
☑	E5P2-10	Mode selection menu	Jack Bauer	Jack Bauer	DONE	28/Sep/25	29/Sep/25	30 minutes	45 minutes
☑	E5P2-9	Fix Initial Game State Bug	Nifemi Lawal	Nifemi Lawal	DONE	26/Sep/25	26/Sep/25	30 minutes	25 minutes
☑	E5P2-8	Add Folders to Repository	Nifemi Lawal	Nifemi Lawal	DONE	25/Sep/25	26/Sep/25	10 minutes	12 minutes

T	Ticket Key	Summary	Assignee	Reporter	Status	Created Date	Completed Date	Original Estimate	Actual Time Spent
☑	E5P2-7	Create Profile Picture Upload Functionality	Nifemi Lawal	Nifemi Lawal	DONE	25/Sep/25	26/Sep/25	1 hour	2 hours, 20 minutes
☑	E5P2-5	Create Login/Guest Functionality	Nifemi Lawal	Nifemi Lawal	DONE	25/Sep/25	26/Sep/25	3 hours	3 hours, 18 minutes
☑	E5P2-3	Code Refactor	Delroy Wright	Delroy Wright	DONE	23/Sep/25	25/Sep/25	30 minutes	45 minutes
☑	E5P2-2	Connect Jira to Forked GitHub Repo	Nifemi Lawal	Nifemi Lawal	DONE	22/Sep/25	30/Sep/25	30 minutes	45 minutes