Battleship Person-Hours: Estimates and Actuals

Team Members

1. Abir Haque

2. Nikhil Raja

3. Shad Ahmed

4. Rahul Amatapu

5. Gregory Markose

Estimated Person-Hours

This section describes the estimated person-hours for each task, the description of each task, and how those tasks are assigned to team members.

Task Descriptions:

1. Game Setup: Create 10x10 board and handle ship placement

2. Game Logic: Implement the core game logic, such as taking turns, recording hits and misses, and updating the game state.

3. Ship Destruction and Game End Condition: Manage ship destruction when all segments are hit and check for game end conditions.

4. Testing and Debugging: Test the entire game with edge cases included, such as incorrect inputs, firing at the same location multiple times, etc.

5. Documentation: Provide hour estimates and draft and revise system documentation.

6. GTA Meeting: Meet with GTA.

Task Estimate Gantt Chart

Below is a Gantt chart that shows the estimates of each task in addition to the team members responsible for different stages of the project.

Hours	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15.25
Task																
1. Game Setup: **3 hour**			Abir	Abir	Abir											
2. Game Logic: **4 hours**					Shad	Shad	Shad	Nikhil								
3. Ship Destruction and Game End Condition: **4 hours**									Shad	Rahul	Nikhil	Nikhil				
4. Testing and Debugging: **4 hours**												Rahul	Nikhil	Greg	Greg	
5. Documentation: **5 hours**	Abir	Greg											Greg	Rahul	Rahul	
6. GTA Meeting: **1.25 hours*****																Abir, Nikhil, Shad, Rahul, Greg

*** 15 minute meeting * 5 people attending that meeting = 1.25 person hours

Final Estimate for Person-Hours

According to the Gantt chart above, the project will take a **total of 21.25 person-hours**. This is derived by adding hours taken for tasks 1 through 6 (Task #1 + Task #2 + Task #3 + Task #4 + Task #5 + Task #6 = 3 + 4 + 4 + 4 + 5 + 0.25*5 = 21.25 hours). The hours needed for Task #6 (GTA Meeting) is calculated as the 15 minutes needed to meet for the GTA meeting multiplied by the number of team members needing to attend the meeting, which is 5 team members. As a result, 15 minutes * 5 team members is 1.25 person hours.

Since we have 21.25 hours to divide among 5 team members, **each team member is assigned 4.25 estimated person-hours.** The breakdown of tasks and person-hours is already seen in the Gantt chart above.

Actual Person-Hours for Project Completion

Date + Hours / Task	9/8	9/9	9/10	9/11	9/12	9/13	9/14	9/15
1. Game Setup		Abir: 2 Rahul: 1						
2. Game Logic				Shad: 3	Shad: 2	Rahul: 1		
3. Ship Destruction and Game End Condition				Shad: 1	Nikhil: 2	Nikhil: 1		
4. Testing and Debugging						Nikhil: 2 Rahul: 1	Rahul: 1 Greg: 2	
5. Documentation	Abir: 1				Greg: 1		Abir: 3 Rahul: 2 Greg: 2	Abir: 1 Rahul: 1 Greg: 1
5. GTA Meeting					Abir: 0.25 Nikhil: 0.25 Shad: 0.25 Rahul: 0.25 Greg: 0.25			

Member	Total Hours Worked
Abir	7.25
Nikhil	5.25
Shad	6.25
Rahul	7.25
Greg	6.25
Team Total	**32.25**

Overall, the project took 1.5x times more time than our original estimate. A lot of this can be attributed to additional overhead associated with context switching from classes to working on this project.