

Assignment #6 — Milestones, Timeline, and Effort Matrix

Course: Senior Design (Fall 2025) • Project: Adaptabrawl — 2D Multiplayer Fighting Game

Team Members

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Milestones & Deliverables

ID	Milestone / Deliverable	Type	Date	Explanation
C1	Team Contract signed	Completed	2025-09-15	Roles, norms, and weekly cadence agreed (planning Wed; playtest Fri).
C2	Design Diagrams submitted (A4)	Completed	2025-09-28	Level 1–3 diagrams for inputs/outputs, subsystems, and netcode paths.
C3	Tasklist finalized (A5)	Completed	2025-09-29	20 project-specific tasks with owners and verbs, ~5 per teammate.
C4	Project Description drafted	Completed	2025-09-25	Problem framing, vision, MVP→Beta scope, and tech stack thesis.
M0	Repo bootstrap	Planned	2025-09-20	Unity LTS selection short-list, Git LFS, basic CI smoke build.
M1	Engine lock (Unity LTS)	Planned	2025-10-10	Decide engine; freeze versions and architecture sketch.
M2	Core combat prototype (offline)	Planned	2025-10-24	Movement, attacks, block/parry; FSM + hit/hurtboxes working.
M3	Status effects v1	Planned	2025-10-31	Poison, heavy-attack, low-HP with readable UI timers/icons.
M4	Adaptive conditions v1	Planned	2025-11-07	Stage/weather modifiers wired to disclosed stat/move changes.
M5	Netcode baseline + lobbies	Planned	2025-11-21	Host-auth, client prediction, room codes via Relay/Lobby.
M6	Online combat parity	Planned	2025-12-01	Online matches mirror offline behavior; determinism audit pass.
M7	Usability & perf pass	Planned	2025-12-08	Controller remap, accessibility, VFX budgets; 60 FPS target.
M8	S1 Vertical Slice build	Planned	2025-12-12	Two fighters, one stage, online 1v1; playtest + submission.

Table 1.1 — Project Timeline (Tasks Only)

Task #	Task (short)	Owner	Start	End	Status	Milestone Links
1	Identify online model & session flow	KS	2025-10-01	2025-10-06	Planned	
2	Design state updates & prediction flow	KS	2025-10-03	2025-10-10	Planned	M1
3	Implement Lobby/Relay + room codes	KS	2025-10-10	2025-10-24	Planned	M1, M2
4	Movement prediction & correction	KS	2025-10-17	2025-10-31	Planned	M2, M3
5	Online stress tests (RTT/jitter/loss)	KS	2025-11-01	2025-11-21	Planned	M4, M5
6	Combat flow + cancel & buffers	SS	2025-10-01	2025-10-08	Planned	
7	Hit/hurtbox & damage system	SS	2025-10-08	2025-10-18	Planned	M1
8	Two starter fighters (movesets)	SS	2025-10-15	2025-10-29	Planned	M2
9	Status/Condition system v1	SS	2025-10-22	2025-11-01	Planned	M2, M3
10	Frame data tuning + playtests	SS	2025-11-01	2025-11-14	Planned	M4
11	HUD: HP bars + status timers	KSh	2025-10-10	2025-10-20	Planned	M1
12	Lobby & post-match UI flows	KSh	2025-10-20	2025-10-31	Planned	M2, M3
13	Input maps + in-game rebind	KSh	2025-10-25	2025-11-05	Planned	M3
14	Readable VFX/SFX palettes	KSh	2025-11-01	2025-11-15	Planned	M4
15	Usability/accessibility tests	KSh	2025-11-15	2025-12-05	Planned	M5, M6
16	CI: Win64 build on PR	YB	2025-10-05	2025-10-12	Planned	M1
17	Telemetry/exporter (opt-in)	YB	2025-10-20	2025-11-03	Planned	M2, M3
18	Training mode + hitbox viewer	YB	2025-11-03	2025-11-17	Planned	M4
19	Perf profiling & budgets	YB	2025-11-10	2025-12-01	Planned	M5, M6
20	Docs/controls/troubleshooting	YB	2025-12-01	2025-12-10	Planned	M6, M7

Table 1.2 — Project Timeline (Milestones Only)

Task #	Task (short)	Owner	Start	End	Status	Milestone Links
M0	[Milestone] Repo bootstrap	—	2025-09-20	2025-09-20	Target	—
M1	[Milestone] Engine lock (Unity LTS)	—	2025-10-10	2025-10-10	Target	—
M2	[Milestone] Core combat prototype (offline)	—	2025-10-24	2025-10-24	Target	—
M3	[Milestone] Status effects v1	—	2025-10-31	2025-10-31	Target	—
M4	[Milestone] Adaptive conditions v1	—	2025-11-07	2025-11-07	Target	—
M5	[Milestone] Netcode baseline + lobbies	—	2025-11-21	2025-11-21	Target	—
M6	[Milestone] Online combat parity	—	2025-12-01	2025-12-01	Target	—
M7	[Milestone] Usability & perf pass	—	2025-12-08	2025-12-08	Target	—
M8	[Milestone] S1 Vertical Slice build	—	2025-12-12	2025-12-12	Target	—

Table 2 — Effort Matrix (Percent of Effort per Task)

Columns: KS = Kartavya Singh, SS = Saarthak Sinha, KSh = Kanav Shetty, YB = Yash Ballabh. Each row sums to 100%.

Task #	Task (short)	KS	SS	KSh	YB
1	Identify online model & session flow	65%	10%	10%	15%
2	Design state updates & prediction flow	65%	10%	10%	15%
3	Implement Lobby/Relay + room codes	65%	10%	10%	15%
4	Movement prediction & correction	65%	10%	10%	15%
5	Online stress tests (RTT/jitter/loss)	65%	10%	10%	15%
6	Combat flow + cancel & buffers	10%	65%	15%	10%
7	Hit/hurtbox & damage system	10%	65%	15%	10%
8	Two starter fighters (movesets)	10%	65%	15%	10%
9	Status/Condition system v1	10%	65%	15%	10%
10	Frame data tuning + playtests	10%	65%	15%	10%
11	HUD: HP bars + status timers	10%	10%	65%	15%
12	Lobby & post-match UI flows	10%	10%	65%	15%
13	Input maps + in-game rebind	10%	10%	65%	15%
14	Readable VFX/SFX palettes	10%	10%	65%	15%
15	Usability/accessibility tests	10%	10%	65%	15%
16	CI: Win64 build on PR	15%	10%	10%	65%
17	Telemetry/exporter (opt-in)	15%	10%	10%	65%
18	Training mode + hitbox viewer	15%	10%	10%	65%
19	Perf profiling & budgets	15%	10%	10%	65%
20	Docs/controls/troubleshooting	15%	10%	10%	65%

Prepared on 2025-10-02. This document consolidates milestones, a date-bound timeline, and an effort matrix for the Adaptabrawl team.