User Evaluation

Cohort 3 Team 4

Kiran Kang

Hannah Rooke

Ben Slater

Abualhassan Alrady

Cassie Dalrymple

Charles MacLeod

Dash Ratcliffe

Harley Donger

5(a) User Evaluation Method

Participants
The evaluation involved 6 participants. All participants were recruited from other ENG1 project teams and had no prior experience with the current system.

Recruitment
Participants were recruited through direct contact during scheduled practical sessions. Participation was voluntary and unpaid.

Ethical Procedures
All participants were provided with a written information sheet outlining the purpose of the study, what participation involved, the voluntary nature of participation, data anonymity, and contact details for the research team. Participants also completed a consent form prior to testing to confirm informed voluntary participation. No personally identifiable information was collected.

Procedure
A free play task-based usability evaluation was conducted. Participants were given a task sheet instructing them to play the game naturally with the goal of escaping the maze within the time limit, without prior explanation of mechanics or event behaviour. The task sheet also encouraged think aloud behaviour and structured post play feedback through guided questions.

Each session followed this structure:

1. Consent confirmation and briefing.
2. Unassisted free play with the escape objective.
3. Researcher observation without intervention.
4. Post play interview and usability problem reporting.
5. User assigned severity ratings (1-5).

If a participant did not naturally encounter certain core features (for example, a hidden event), they were asked to return to the game, with the new objective of exploring the full game to ensure full feature coverage: this allowed us to assess feature discoverability. Each session lasted approximately 15-20 minutes.

Data Collection
The following data were collected:

- Observational notes: the evaluator recorded user behaviour, navigation choices, hesitations, and visible confusion during gameplay.
- Verbal think aloud comments: participants verbally expressed their thoughts, expectations, and frustrations while playing the game.
- Post play interview responses: after gameplay, participants answered structured questions about clarity, usability, and overall experience.
- User assigned severity ratings (1-5): severity ratings were assigned directly by participants after gameplay using a standard 1-5 usability severity scale. Only issues experienced and reported by users were rated.

Tools Used
Information sheets and consent forms were used to ensure informed and voluntary participation. Task sheets provided consistent instructions to users. Manual note taking by the evaluators took place during the user playthroughs (using an observation sheet that guided them on what to look out for and take notes on), before they then carried out a post play interview using a structured set of questions. These tools were used to support the data collection process.

Justification of Method
A free play evaluation was selected to assess the natural discoverability of game mechanics, clarity of feedback, navigation, time pressure awareness, and scoring comprehension. This approach reflects realistic player behaviour and is particularly appropriate for a maze based exploratory game, where usability issues related to confusion and feedback emerge organically rather than being artificially induced through forced tasks.

5(b) Usability Problems and User Severity Ratings

ID	Usability Problem	Description	Severity (1–5)	Frequency	Users
U_Collisions	Player collision on corners and tight gaps	Some players frequently collided with wall edges, doorways, narrow routes, and the bottom right puddle, making it difficult to move smoothly around tight corners, particularly when moving quickly. This interrupts gameplay flow and can cause momentary loss of control.	3	3	P1, P4, P5
U_PlayerVisibility	Player hard to see at game start	At the start of the game, the player visually blends with the floor texture, making it difficult for the user to immediately locate their character and understand where they are positioned within the maze.	2	1	P1
U_ObjectiveClarity	Objective unclear at start	The main objective of the game (escaping the maze) is not explicitly communicated at the beginning, leading to brief initial confusion about what the player should be aiming to do.	2	2	P1, P3
U_SpeedBoostControl	Speed boost reduces control	The speed boost power up increases movement speed to a level that makes precise navigation difficult in narrow corridors, resulting in reduced control and increased collisions with walls and obstacles.	2	2	P4, P5
U_ScoreVisibility	Scoring and counters not immediately noticeable	The scoring system, including how events and time affect the score, is not immediately apparent during gameplay: some users understood scoring mechanics late or after completing the game.	2	2	P1, P5
U_SlowPlayerMovement	Player movement feels slow	The default movement speed of the player felt slow to one user, which can make navigation feel less responsive, even though the user noted that it remains playable given the map size and time limit.	2	1	P6
U_EventText	Text effects reduce readability	Animated text effects (e.g. associated with puddle interactions) reduce readability, making some on screen messages harder to read and understand quickly.	1	1	P6
U_EnvironmentContrast	Interactable elements blend with environment	Certain interactable items visually blend into the surrounding floor textures, making them less noticeable and increasing the risk that new players may overlook them during normal gameplay.	2	1	P4
U_ItemLearnability	Item purpose unclear on first encounter	The purpose of some items is not immediately clear when first encountered, requiring users to infer their function through later gameplay interactions rather than immediate feedback.	2	1	P1