User Evaluation

Cohort 2 Team 1

Ahmet Abdulhamit
Zoey Ahmed
Tomisin Bankole
Alanah Bell
Sasha Heer
Oscar Meadowcroft
Alric Thilak

User Evaluation Method

Overview

We conducted a task-based user evaluation to assess the usability of the prototype game. We gave participants the game and allowed them to naturally progress through the gameplay tasks. The evaluation focused on exploring how users navigated the maze, learnt the controls, interacted with in game elements and reached the completion state. We believe this will help us find usability issues, analysing how users attempt to complete these actions.

Recruiting Participants

We recruited 7 participants from other teams within our cohort. We made sure that no participants were members of our team. We knew it was crucial to recruit participants who are unfamiliar with the game to help avoid the “curse of knowledge”. Unfamiliar users also mean that usability issues are in a first-time experience.

Ethics

We followed the provided ethical procedures which meant each user was given an information sheet and completed an informed consent form. We made sure that participants understood they could withdraw at any time. We also made sure that no audio or video recordings were made and we anonymised all data that we collected to ensure confidentiality.

Designing Tasks

We had our participants naturally progress through our game to expose them to gameplay tasks which were typical ways to use the system. This included navigating the maze, understanding movement controls, interacting with in game elements and progressing towards the game’s completion condition. This design allowed participants to become familiar with the controls and ensure any issues were not due to unfamiliarity but usability.

Collecting Data

We encouraged the participants to talk out loud while completing tasks to help us understand their grasp of the system. We also collected data through observation. We established roles such as an evaluator who observed each session and recorded instances of confusion or a failure in a task. When usability problems were encountered, we asked participants to describe the issue and provide us with a severity rating. We used a five point scale which ranged from cosmetic to catastrophic.

We made sure each session was consistent. This meant 20 minute sessions which followed the same procedures. We had two roles - a team member who led the session and a team member who observed and recorded notes. We debriefed participants after each session.

Method Justification

We believe that our system being successful depends on a user’s ability to navigate the maze environment. This meant task based user evaluation based on gameplay progression was appropriate for this project. Our combination of observation and think-aloud protocols with severity ratings meant we could understand users’ thought processes and prioritise which usability issues to fix. This method produced actionable feedback which will guide our future development.

Usability Problems

Seven users were interviewed, with each participant being labelled as UserX, with X being the order they were interviewed in. Each problem identified across users was assigned the average severity rating, measured across 1 to 5 in ascending order of importance, and an issue was created on the game's Github repository.

Problem	Affected Users	Linked Requirements	Github Issue Report	Severity Rating
Text can overlap at times, (i.e. NPC dialog being behind event count in the top left)	User6	FR_DIALOGUE	https://github.com/alanahbell/maze-game-v2/issues/20	1
Some users found the camera too zoomed in to be comfortable	User6, User7	UR_DEVICE, UR_MAP	https://github.com/alanahbell/maze-game-v2/issues/22	2
The settings button appears to be broken (no settings page is implemented yet.)	User1, User5, User6	NFR_LAUNCH	https://github.com/alanahbell/maze-game-v2/issues/21	2
Security guards have unnecessary large hitboxes / can be difficult to get past	User1, User2	NFR_DIFFICULTY	https://github.com/alanahbell/maze-game-v2/issues/23	2
Some users do not finish the game in the allotted time.	User2, User3, User4, User5	UR_TIME, UR_GAMEOVER	https://github.com/alanahbell/maze-game-v2/issues/24	3
Using items in inventory is not easily discoverable or documented.	User1, User4, User5, User6	UR_INVENTORY	https://github.com/alanahbell/maze-game-v2/issues/25	3
Some items and walls can be walked through by the player	User4, User7	FR_KEYPRESS, UR_INPUT	https://github.com/alanahbell/maze-game-v2/issues/26	3
Item's effects and bonuses are not documented anywhere or well, leading to confusion about their intended purpose.	User1, User2, User6	UR_INVENTORY, FR_APPLE, FR_COOKIE, FR_ROTTEN_APPLE	https://github.com/alanahbell/maze-game-v2/issues/27	3
It is not obvious if an area is blocked by an invisible barrier, leading to users being confused and wasting time walking into invisible walls.	User1, User6, User7	UR_FAMILY,	https://github.com/alanahbell/maze-game-v2/issues/28	4
In some cases, pressing T over a portal does not transport the user back to the main world.	User3, User5	UR_PORTAL, FR_KEYPRESS	https://github.com/alanahbell/maze-game-v2/issues/29	5