

Paper prototype Bonds



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Context

For the group project this semester, me and my group decided to make a video game to battle loneliness. This game is to be a multiplayer video game in which you work together to solve mysteries in a medieval fantasy town. We wanted to test this game and the concept before building it and having to start all over, so me, Leon and Ashley made a paper prototype of our game with a small story that you could follow and solve a mystery in as well. it was quite a bit of work but we managed to test it pretty well and it gave us really useful feedback.

First sketches

At first me and my two group members started brainstorming to get an idea of how the game would go, we did this through means of a story board. This is the story board we made:



Short explanation

Essentially the idea was that you would spawn in and talk to an introduction npc that would explain to you your quest to solve a mystery. Then you would have to go to the gate and to unlock the gate, you have to play a minigame, in this case, lockpicking.

After you pick the lock, you can get through and roam the city area and talk to a few different NPCs who would give you clues about the mystery.

After this area you go to the gate again and play a different minigame. A circular rolling ball maze that you have to solve.

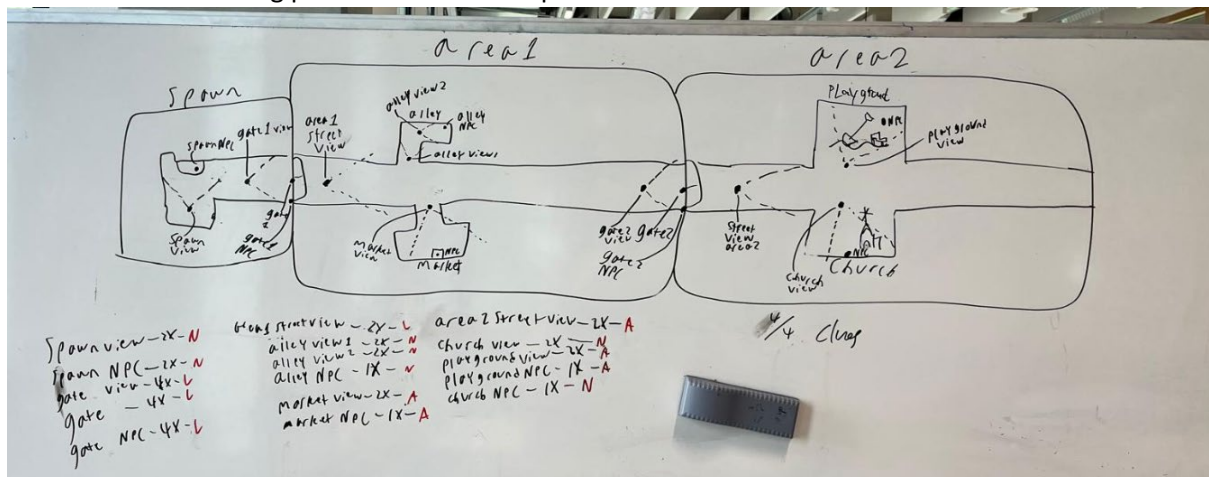
After that the cycle repeats and after the second area you can hold a vote for who the culprit is and solve the mystery.

Making the paper prototype

We decided on making a paper prototype because it would be an interesting way to test our product. We thought having a physical version to play would be quicker to make as well as a good way to envision the whole game. It would also work well with simulating multiplayer.

Planning it out

Me, Ashley and Leon made a plan on how to make the paper prototype. Because it would be a multiplayer paper prototype, it would need to have every scene drawn twice or even 4 times depending on the scene. I drew a map of the game on the board and pointed out on it where all the scenes would be taking place. Here is the map:



Scenes

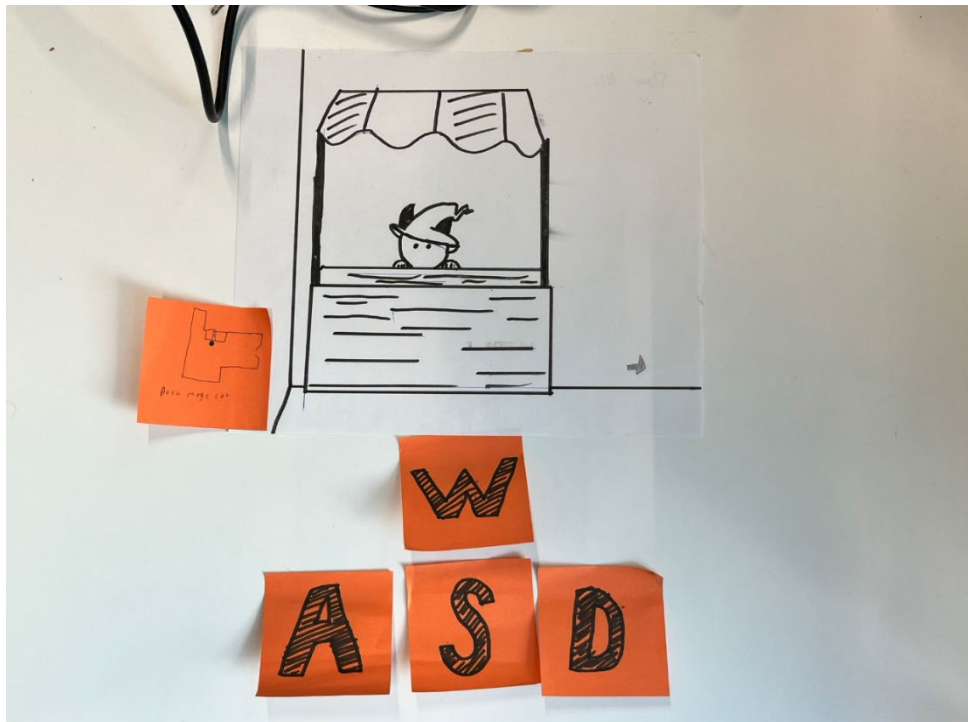
We needed to plan out the scenes so that we could have 2 players at the same time in the same spot. We wrote on the board how we would split the tasks, how many times a scene would need to be drawn and who would draw it.

We divided it like this:

Scene name	amount	Who draws it
Spawn view	2x	Nieck
Spawn NPC	2x	Nieck
Gate view	4x	Leon
Gate	4x	Leon
Gate NPC	4x	Leon
Area 1 street view	2x	Leon
Alley view 1	2x	Nieck
Alley view 2	2x	Nieck
Alley NPC	1x	Nieck
Market view	2x	Ashley
Market NPC	1x	Ashley
Area 2 street view	2x	Ashley
Church view	2x	Nieck
Church NPC	1x	Nieck
Playground view	2x	Ashley
Playground NPC	1x	Ashley

the setup

We planned it out to have a certain way to play. Essentially, there would be a screen (piece of paper with a scene drawn onto it) in front of the user with indicators on it on where they can go. These would be button keys (or arrows). Those corresponding keys (WASD) would be below the screen so you can “walk” around the drawn world like you would in our pc version of the game. There was also a minimap on the bottom left that tells you where you are and also has the name of the scene on it not only for ease of navigation but also for us as testers to see where the next scene should be.



Minigames

The prototype also consisted of two minigames, lockpicking and a maze minigame. I cut out a little lock out of cardboard and made a lockpick and a tension key. Ashley modelled a maze and 3d printed it out.

for the maze you'd have to work together and tilt a maze to get a ball to the centre of the maze. Each player would get two sides and they could only push down with their thumbs. If they needed a side of theirs to go up they'd have to talk to the other player.

The lockpicking game would be based off of lockpicking in the game Skyrim and would work essentially the same but to make the players work together, each player gets either the lockpick or the tension key.

The first player inserts the tension key, second player inserts lockpick and twists counterclockwise, until the tester says 'click'. Then the two players have to move in unison about 90 degrees clockwise. The angle between lockpick and tension key must remain the same in order for the players to win.

Testing

We tested our product during the showcase event on the 15th of May. Here we tested our product with multiple students and teachers, and it really showed that our concept worked. The test was enjoyable not only to test but according to players, the game was also really fun to play. We also noticed that players who didn't know each other before hand, found it easier to communicate after the game than before.

Setting up

We set up a research paper with research questions. The research questions were:

- In what manner do people talk to each other during the game as well as before and after? (Friendly banter, shy/silent, strategically, etc.)
- How do strangers get along during the game versus friends?
- Was there any confusion during the game or moments where the player was held up? If so, what?
- Does the game naturally encourage communicating with each other? And why?

We wanted to answer these questions so we would know if our product truly worked the way we had intended it to.

The tests would go as follows: we pick out to people that come to our table or in the OIL and we ask them to come play our game. Ideally these people wouldn't know each other beforehand or not too well anyway.

We would ask them a few questions beforehand separately. These questions were:

- What do you think the main goal of this game will be?
- How well do you know each other?

These questions would allow us to gauge how effective our product would be later on after playing the game. We also wanted to see if our game, as we advertised it was clear to others.

Then we'd do the tests. We'd explain the premise of the game and we told them to play using the buttons in front of them and we'll do the rest. We would also voice over the dialogues for a bit of added realism. During the minigames we also kept an eye on the players and how they would play. We would tell them when they lost or won.

What I did during tests

I was the tester and overseer during the tests. I would help with switching papers around, helping players with the interactions, explain the game, minigames and be the referee for said minigames too. As you can see in the picture on the top of the document.

Test results

We got some really good results from the tests and the results show that the game worked and players tended to bond over the game. We also noticed that there were some issues with the game that players didn't fully understand or like.

Large summary

I wrote this summary using chatgpt with the prompt:

“write a summary but keep in mind that the point of the game is to bond over the game and get two strangers to know each other better. write about when the players did and didn't know each other and the differences in their friendships before and after playing. Also write about the things that players did and didn't like.”

When Strangers Played Together

- Players who didn't know each other often started quietly, confused about mechanics and hesitant to communicate.
- As they progressed, shared tasks—like the **minigames, puzzles, and voting sections**—created natural reasons to talk.
- These activities led to cooperation, moments of laughter, and eventually deeper engagement.
- Several players ended the session by introducing themselves, showing that the game helped lower social barriers.

When Friends Played Together

- Friends communicated easily and navigated tasks with minimal explanation.
- They often split up to explore separately, confident in each other's abilities.
- Their connection didn't change significantly, but they were more likely to focus on story elements, make fast decisions, and explore the game's depth together.

What Players Liked

- **Minigames** were consistently praised as fun and engaging.
- The **storyline and setting** were described as charming, medieval, and RPG-like.
- **Working together** to solve puzzles helped players feel like a team.
- Clear **audio cues** and feedback in minigames were helpful and satisfying.
- The game's **potential for real digital play** excited many testers, who saw promise in the prototype.

What Players Didn't Like

- **NPC interaction rules** (only one person could talk) were confusing or frustrating for many.
- The “**waiting for player**” screen made players feel pressured or impatient.
- Several players were **confused at the start**—controls, objectives, and character roles were not always clear.
- Some wanted **more feedback** in minigames (e.g., better indicators for success/failure in lockpicking).
- A few thought **story pacing** was slow, especially when forced to wait on dialogue or another player’s action.

Conclusion

Strangers showed the most growth in connection, transitioning from silent cooperation to active teamwork and conversation. While friends were already bonded, the game reinforced their dynamic. The experience works best when it nudges players to rely on one another and rewards joint problem-solving—showing strong potential as a game designed to build relationships.

Research questions answers

Main Research Question: How does the game influence communication and social interaction between players?

The game consistently encourages communication through its co-op mechanics. Players must rely on each other to complete puzzles, understand story elements, and make joint decisions. Over the course of the game, even pairs who began silently or awkwardly were drawn into conversation, showing increased interaction by the end—particularly during tasks that required coordination or shared information.

Sub-Questions

1. In what manner do people talk to each other during the game as well as before and after?

- **Before:** Strangers were quiet or formal; friends were casual or joking.
- **During:** Conversation ranged from hesitant to strategic. As the game progressed, even shy pairs began to speak more directly, especially during puzzles. Some offered each other support or clarified tasks.
- **After:** Most participants—even strangers—were relaxed and engaged, often reflecting together on the story or decisions made.

2. How do strangers get along during the game versus friends?

- **Strangers:** Tended to start slow but opened up over time. Interaction increased noticeably after minigames or shared tasks. In multiple cases, strangers introduced themselves after playing.
- **Friends:** Communicated efficiently with minimal friction. Often split up to cover more ground. The game didn’t deepen their connection but reinforced existing dynamics.

3. Was there any confusion during the game or moments where the player was held up?

Yes, several:

- Players often didn't realize only one person could talk to NPCs.
- The "waiting for other player" screen caused stress or boredom.
- Some players didn't understand lockpicking mechanics or movement controls.
- A few players had unclear objectives in the beginning, leading to early hesitation.

4. Does the game naturally encourage communicating with each other? And why?

Yes. The game's structure requires players to share information (e.g., NPC dialogue), solve tasks cooperatively (e.g., puzzles), and make unanimous decisions (e.g., who stole the carrots). These mechanics create built-in moments where interaction is necessary and meaningful, especially for strangers who wouldn't otherwise talk much.

Conclusion

Our game works as intended, and players do get closer overtime as the game progresses and that's to see from just one game. Players were communicating well, and players tended to cooperate more actively during the minigames as well as after that. Players found some issues with the pacing of the game here and there, especially if they had to wait for the other player. Some also found the controls confusing or found interaction to be confusing. There are areas to be improved in terms of pacing, but the level design and gameplay worked.

Translation to project

This paper prototype was really useful for making the demo game for Night of the Nerds. We decided to remove the lockpicking minigame because people didn't like it too much and they were confused by it as well. The kids that would play it at night of the nerds would find it even more confusing. This would make the game a bit shorter because each test of the product also tended to last about 15-20 minutes which is way too long for an event goer simply wanting to try something out really quickly.

Me and my group decided to keep the maze game and some of the characters from the story, but we changed the story as to not make it as easy on the people who have already played it. We would also from now on explain the mechanics of the game entirely before letting people play so they wouldn't be confused with walking around, jumping or controlling the maze minigame.

Reflection

I really enjoyed testing and building this paper prototype. It was the first time I had built a paper prototype to this scale before. I think me, Leon and Ashley thought it out really well and the planning for it went really well. I was mainly leading the planning of the level design itself whilst Ashley and Leon were more focused on building the story attached to it. I really liked that we got to combine our strengths here of story writing and making complex projects.

I think I have a thing for thinking of complex subjects and putting them in order. I've always been pretty decent and grasping the bigger picture of complex projects, and I showed that here with the planning of the paper prototype.

The testing was also a lot of fun to do. I enjoyed seeing people go from strangers to getting to know each other better and in the end introducing themselves. I think I could've been a bit more involved in taking notes of the test and that is something I should improve in. I never liked taking notes and I've never really been good at writing structured notes because I can't focus on writing and observing at the same time. I want to improve at it. For the next time I'll see if I can improve my observational skills during testing and try to be more mindful of smaller hints that players might give.