Playtesting report

Our playtesting procedure was divided into three components: a Google Forms provided in the form of a QR Code players could fill out after playing, an analysis done by our team through observation of our players in a real scenario, and a script running in the background to gather certain data from the matches played during the event.

Through our ***questionnaire*** we aimed to gather the public's opinion on various mechanics of the game, like our bombs and power-ups, by utilizing a rating system (1 to 5) and the option to provide feedback on each of them, while also having a section to gather player data, like preferred game types, video game playing frequency and age, in order to know what could be influencing different points of view. Below we shall present the information gathered in this section, as well as the implications it might bring:

- **Player statistics:** Through the collected data we can't realistically draw much information from the participation's age, considering a great deal of the event was composed of individuals between 18 and 24 years old. However, we can see a higher percentage of players who prefer action games within our audience, as well as those that play games multiple times a week and that have at least played games like Maze Bomber before, meaning we can expect our feedback to have some experience backing it up, especially considering those parameters coincide with our target audience.

- **Controls:** From our feedback, most players rated our controls a *4 out of 5*, meaning we can assume there were no major flaws with it, at least through the use of controllers, which was the way our audience got to experience Maze Bomber in the event. That being said, we did get some constructive criticism that could prove useful, mainly regarding the placement of the default bomb (Y and not A) and some players thinking the controls were somewhat drifty through the use of the analog stick, and requesting the option for D-pad controls for movement as well. We believe this to be valid criticism, especially considering one of the teachers also gave us some feedback on both the placement of the main bomb key and how the character feels when they lose momentum on walls. It is now within our plans to include different options for movement, a swap of placement of the bombs in our controls, as well as a way to lessen the loss of speed on walls.

- **HUD:** Looking at the criticism we got, it is safe to say the inventory HUD has some flaws, but not glaringly so, with an overall split between a *3 out of 5* and a *4 out of 5* rating. The criticism seems directed to the size of our HUD, as well as a desire to include the associated buttons to each bomb present in it, a valid feedback we also got from one of the teachers that evaluated our game. Unfortunately, an increase in size is not realistic without harming the rest of the gameplay and presentation of the game, but we understand the need for associated buttons for each bomb in the HUD and will look into making it more clear for our players.

- **Walls:** The walls have proven to be our least criticized game mechanic, with most people voting with a *5 out of 5*. There was not a lot of significant feedback on this

one, minus one comment that requested a lower health bar to our walls, most likely to speed up the process of mowing down the maze to reach other players. We aren't sure if that would be a positive change to the overall pace of the game, but we will at the very least test it and see that it is changed according to results.

- **Spawners:** The bomb spawners were the most critized part of our game, getting an even split between both a *2 out of 5*, a *4 out of 5* and a *5 out of 5* rating. From the feedback we received and what we noticed through observation, it isn't very intuitive and even fair, given the random frequency of spawns near each player. The criticism we got requested for a more fair split between them, timers and even a few fixed placements that are always visible, which landed the bomb spawners a seemingly lot of space for improvements. From this information, we aim to make their placement more evenly distributed on the map, as well as adding some form of timer so players know where they can refill their dynamites. As far as fixed and always visible placements go, we believe that takes from what makes Maze Bomber unique, especially if we consider our fog of war mechanic, and as such we don't think we will humor this change.

- **Bomb types:** As far as bomb types go, much like the walls there wasn't a lot of criticism given to them, landing it safely on a *5 out of 5* rating, meaning players have enjoyed their mechanics and the diversity Maze Bomber provides in that aspect. However, like the power-ups we will mention below, they share one criticism we believe to be relevant, which was the frequency of their spawning after breaking down a wall. We have heard this feedback, and will look into a more satisfactory spawn of pickups from our walls, testing it to make sure an increased rate won't make the game unbalanced.

- **Power-ups:** Like its pickup cousin the bombs, it received mainly a *5 out of 5 rating*, although with a bigger frequency on *4 out of 5* than the aforementioned bombs. This is most likely due to them having more feedback to be received than the bombs did, with the request for increased dropping odds, again, like the bombs received, but with the added criticism to a lack of knowledge of what each brough to the player and a desire to see some sort of in-game feedback when picking them up. We noticed through our observations that the players did struggle to understand what each of them did, and as such will look into implementing this added feature for future clarity.

Our ***observation notes*** were instead focused more on gameplay balance. With them, we wanted to check for potential dominant strategies and any specific bomb or power-up that was overtuned or undertuned, but to also check for any specific part of the gameplay loop a new player might struggle with as well. Below we shall present the information gathered in this section, as well as the implications it might bring:

- **Dominant strategies:** From what we gather, there is no specific strategy in the game that is dominant over the other, or that offers more advantages than others. We've seen a fair share of defensive players that focused on getting power-ups and bombs, those that played aggressively with a desire to reach their opponents as quickly as they could to go on the offensive, and even players that setup traps to bait adversaries after only playing a few games. There was a bigger tendency for players

to go on the offensive, but that was most likely due to the competitive nature of the tournament we held, and the type of players the game gathered during the event, which seemed to have a preference for action games.

- **Overtuned bombs/power-ups:** As far as bomb goes, we did notice that the landmine might be unfairly balanced. It deals a lot of damage considering how small it is on screen and how much time the player is given to react, and a lot of wins came from players making good use of them, or even suiciding on their own mines. Outside of that, there was no other glaring issue in overtuned pickups, much less so in the power-ups, which were as strong as they were intended to be. Granted, power-ups like the extra bombs are stronger than others, but that is intended on our part.

- **Undertuned bombs/power-ups:** On the other end of the spectrum, from what we observed there was no bomb type that was underperforming, and the players made use of all the options given to them. The same can be said for the power-ups, with them working within the intended power-scale. However, we did notice players struggled to control their character when receiving the move speed buff while still in enclosed spaces, which might be something we look into smoothing it over for a better overall feel and control. This might also go back into the issue regarding movement feel mentioned earlier in this document, which we will also analyze with it.

- **Struggles in the gameplay loop:** Through observation, we can tell there was a bit of a struggle for players jumping into the game right away, especially if they were not used to this sort of game. Granted, no one checked the “About me” section of the game, or looked too much into the given control sheet, but we believe that is natural given the lack of practice or chance to experiment more, especially since players that repeatedly played the game saw a quick improvement of their game knowledge. However, there were a few spots in the gameplay loop that the players seem to struggle a bit more than expected, which were noted in the feedback we received both in person and through the forms- these being the bomb spawners and the inventory HUD, as well as understanding what the power-ups dropped by the walls. As mentioned above, we are making plans to improve upon the given feedback, especially so on the most glaring issues we noted during the event.

Finally, our ***script***- this part is a lot more simpler to explain. All it aimed to do was collect more detailed data that we could miss with our observation, and that players might fail to notice, that could otherwise be useful for improving the game. With it, our goal was to specifically check for the usage of different bombs, to know if players made use of all of them or if there was a dominant type, as well as the match time for each individual game played. Below we shall present the information gathered in this section, as well as the implications it might bring:

- **Bomb usage:** From the gathered information, there is no glaring issue when compared to our expectation: the default bomb saw more use, considering it is the main option given to the player, but the other bombs saw a proper amount of use when compared to the amount of times players got them. The C-4, however, dropped less given its chance, which ended up drastically damaging its use, which we intend

on fixing in future implementations.

- **Match time:** Matches during the MOJO event tended to last between 5 and 8 minutes, depending on the number of players and their experience. We believe this is a comfortable amount of time per match, but given how long matches tend to be between two players, we think the feedback given in regards to our walls, which related to lowering their overall health, might be worth considering to shorten the time needed for players to reach one another, thus making matches faster and more chaotic, which is one of the points of the game.

Development and exploitation plan

Our development plan post course starts with taking the feedback received during the MOJO event to balance the game and fix any potential issues that have been brought to our attention that we've deemed make sense to implement. This goes from updating our inventory HUD, to giving better feedback upon collecting items, to game balancing issues like fine tuning our bombs and increasing the odds of our walls to drop items, among other suggestions we've mentioned above. This would last us about a month to properly implement and update the game.
During that time, in parallel, we would aim to find suitable expansions to the team, like other programmers, and especially one or multiple students from the area of design to help embellish the game. We'd prefer to avoid adding unnecessary costs to this project, considering it is more of a smaller project, especially so since we have no monetary goals for this project, so we'd rather not aim for already established professionals, and instead pick other students willing to progress it for the sake of gaining experience and some revenue at the end of it. Together with that expansion in our assets, we also consider it opportune to gather potential testers of our game, to whom we'd send the corrected version after it was updated post MOJO. Through their feedback we would keep fixing any existing bugs or any necessary suggestions they would gather from their testing. This cycle could go on for as long as necessary, but we can assume a few months, depending if we end up expanding the game core features.
Before doing so, the next step would bring us to releasing a beta version of the game to the public for free. With this, we would use any feedback given to us by our players to further enhance the game, as well as release potential updates to the game's mechanics, to which the players could provide their input as well, and potentially experience part of them in said beta version.
After all the feedback received and updates to the game, which would potentially last us a couple of months, the next step would be to finally work on spreading publicity for the game- be it through social media, within IST institutes, online forums and even streamers, we'd spread word of the launching of the game, which would be soon.
Finally, the game would be released, specifically through the self-publishing option Epic Games offers, which is free of charge if the game has no costs, which is our plan to begin with. We also consider providing it through itch.io. Of course, through its release we would keep listening to our players, fixing any existing bugs reported and supporting the game for a while after its release.

Postmortem report

Our project started with a good launching point, considering one of our team members already had a skeleton of it ready to be further polished and enhanced. We decided to push on with it, selling it in the **concept pitch** as a variant to the original Bomberman with more gameplay options and an overall bigger depth to it. In this first stage, we now realized the game was too similar to its predecessor and needed to find its own ground to stand on, and we barely focused on the setting of the game itself. There was an idea to implement a **scoreboard** and ranking system, which will be considered on a later date, but couldn't be done within the short time period we were given.

Regretfully, we did not do a stellar job understanding how to properly provide our view of the game in the documents requested of us in the **first and second development cycle**, meaning the **design document**, nor did we make good use of the **development plan** provided in Trello to showcase the distribution of work between the team. Perhaps it was due to a lack of research through the materials provided in our lectures, but we did not understand certain points we needed to explain back then. We have since then improved our research on the subject, and have learned to fix issues we had back then, especially so in the scenarios and conceptual models that were lackluster in the first delivery of the **design document**, which was shown in the second iteration, as well as the gameplay loop, which while still faulty in the second part, saw improvement after the matter.

Our shown **prototypes** were a hit, however, and we believe we were quick to understand any faults the game had and updated it accordingly, which later showed the fruits of our labor in the **MOJO event**. We were also capable of providing meaningful feedback during that stage of progress as well, as shown to what was provided to our colleagues. There were some struggles during the **second development cycle**, especially so in the added sections of the **design document**, which unlike the updated versions we delivered of past subjects, were lackluster in any proper explanation in depth. The controls were not detailed enough, we confess to have misinterpreted what the presentation section truly meant, and both the time and progression were written considering the realistic state of the game for the presentation at the **MOJO event**, and not for the foreseeable future, thus coming out in a very incomplete state.

But not all was grim, since we were able to take the feedback given by our fellow students and professor to deliver what we consider to be a success during the **MOJO event**. Our decision to implement a tournament for publicity sake was well executed, which even included a prize to gather attention, and gave us a lot of information for potential future events, and it was an overall positive experience for us, where we got to properly receive feedback from active players and see other projects within our level in real time, which provided insight on missteps we might have taken, or things we did better.

Overall, besides learning how to make use of the Godot game engine, we learned a lot about the methodologies and theory behind crafting a good game, like considering different personas and their needs, details regarding gameplay loops, among other aspects to take into consideration that we would have otherwise not payed attention to as beginners, and how the whole system tends to work in a real scenario, especially through an experience like the **MOJO**. Our biggest regret would have to come from our design document, which left a lot to be desired, mostly due to poor understanding of certain parts of it, or misunderstanding the end goal of said document.