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**Sprint Report 3**

*Team Fam: Doodle Jump*

Team Fam’s goal for sprint 3 was to implement latency mitigation techniques into the game. We have successfully implemented latency mitigation on the client side by using interpolated input delay. We first calculate the ping between the client and the host by sending a timestamp message to the host, upon arrival, the host sends the timestamp message back to the client in order for the client to calculate the latency between the host and the client. We then use the ping to delay the inputs on the client based on the most recent ping calculation. This technique minimizes jittery movement by pretending to wait for the host to receive player input before processing the input locally on the client side. We were also able to make the game work up to four players without too much work. The ping rose slightly when more players were added, however the gameplay experience was the same.

Our next goal is to add artificial lag to the host so that the host will not have an advantage over the clients, we also plan to add hosted games to the database so that players can find games through our in game lobby system. After we implement these features, we finally hope to polish the game by fixing some minor level syncing issues and platform generation bugs. Overall the project is moving along smoothly and we hope to continue our steady progress.