Team Number: 3
Team Name: Team Pluto
Team Members:
- Sam Williamson
- Veda Jammula
- Jaylee Chase
- Jack Flaherty
- Chandler Phillips
- Suyogya Poudel

Game website idea: <some game>

1. Level designer for users to make levels
    a. Users can name their levels
    b. Allow user to make a progression of levels? I.e. design series of 3 levels but cannot play 2nd until 1st is completed, etc
    c. Option to write a lil story introducing the level ("you wake up stranded on…blah blalh")
2. Search levels by:
    a. Date created
    b. Difficulty, measured by
        i. Proportion of people who finish after starting
        ii. Average time/moves to complete
        iii. Score upon completion
    c. Name
        i. Of level
        ii. Of user who created it
3. Create account
    a. Track progress
    b. Get credit for designing levels (<level name> created by <user>
    c. challenge /invite friends
    d. Edit (branch of) other people's levels
4. Don't NEED account to make levels, but progress won't be saved, and levels created will say "created by anon"

Game piece ideas:
- Black holes
- Asteroids
- Different wall types
    - Hard (invincible) walls
    - Soft walls - you can shoot and they go away
    - Bouncy walls (player velocity is redirected without damage)

- Bombs, when you shoot them they destroy everything in a certain radius (asteroids, player, soft walls)
- Powerups
  - New kinds of shooting
  - Temporary invincibility
  - Extra life/health

Controls suggestion: Only 3 movement controls: forward, turn left, turn right. Turning rotates but does not accelerate the character

Game Ideas:
- Maze
- Tower Defense
- Unfair "mario"
- Spaceship Maze
- Galaga
- The World's Hardest Game
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1. **(DONE) Application Name**(Pick a befitting name to convey the purpose of your application. To be used in all presentations.):
   Finding Pluto

2. **(DONE) Application Description**(A short (2-3 paragraphs) overview description of the application. Provide enough information to explain what functionality and value your product will provide to users of your application.)

   Our product is going to be a website that hosts the game Finding Pluto. The game is meant to be a casual, fun way to pass time alone or with others. The purpose will be to navigate a maze while being thrown different obstacles to overcome (such as asteroids or black holes) and eventually reach Pluto at the end. Users will be able to navigate the maze using the arrow keys and speed will be relevant. Within the game, we will create ten base levels, and then users will have the ability to create their own levels as well, and invite their friends to play. In addition to inviting friends to play, users will also be able to challenge other users for some friendly competition.

When the user first opens the website, they will have a choice as to which level they would like to play. Any levels created by other users will be unlocked to play, however the ten base levels will be unlocked in sequential order (you must pass level one in order to unlock level 2). When a user reaches Pluto, the next level will be unlocked, however points will also be tracked based on the proportion of people who finish after starting, the number of moves it takes to complete the level, and the score upon completion.

3. **(DONE) Vision Statement**

For [target customer]
Who [statement of the need]
The [product name] is a [product category]
that [key benefit, compelling reason to buy].
Unlike [primary competitive alternative],
our product [statement of primary differentiation])

For casual gamers looking to pass a few minutes between stressful activities, or dive deep into a rich collection of community-designed levels and story arcs. The game, Finding Pluto is an interactive level designer where users can invite friends to play levels they created, and compete for higher scores or faster times on each level. Unlike other prepackaged games, Finding Pluto is a customizable experience where anyone can sign on and build their own adventure.

4. **(DONE) Version Control**(Share the link to the GitHub repository that was created for you. This repository should have the following folders: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_3
5. **(DONE) Development Method**(Describe the software development methodology your team will follow. Describe the methodology and the features/steps you will follow. Common methodologies include waterfall, agile/scrum, iterative. You may choose to follow your own hybrid version of these methodologies as best suits your team. We recommend that you use a hybrid of agile methodologies for your project.

We will follow a hybrid approach of agile and iterative methodologies for our project.

https://csci-3308-spring21-014-3.atlassian.net/jira/software/projects/P03/boards/1
Share the link to the board you create for this project on a project management tool of your choosing. It could be on Jira, Trello, GitHub, Pivotal etc. The board should contain at least 4 columns(gathering requirements(user stories), development phase(user stories), testing phase, continuous integration) depicting the stages of development. The backlog column should have a minimum of 5 user stories. You will already be creating user stories on JIRA for Lab 2. They will suffice for Project Milestone 1. However, if you are choosing another tool for project management, make sure to migrate your user stories to that tool. You will be adding user stories to the current backlog at the start of every iteration. Your board will be monitored by your TA and you are required to regularly update it as your project progresses.)

6. **(DONE) Communication Plan**(Describe in a paragraph or two how your team plans to communicate with each other during the course of the project. You must identify a collaboration tool for team members to utilize for coordination of their work and communication among team members. Such tools are Slack, Discord, HipChat, Google Groups, etc.):

   Team Pluto plans to use Imessage group chat, zoom, and email to communicate and collaborate throughout the project. We plan to use these tools to communicate development ideas, schedule meeting times, and to discuss our project in general. We constantly check in with each other's schedule and plan when to meet. These tools allow us to stay connected and update each other on the progress of our project.

7. **(DONE) Meeting Plan**

You will also mention the meeting day, time and zoom link for the weekly meeting with your TA here.)

   Our meeting times are as follows:
   Team Meeting: Friday 4-5 https://cuboulder.zoom.us/j/95576551340
   TA Meeting: Thursday 715-730 : https://cuboulder.zoom.us/j/94951228555

Team Meeting: Wednesday: 4-5pm

8. **(DONE) Proposed Architecture Plan**(Propose an architecture for your app. What technologies will you be using on the backend? What technologies on the front end? How will they communicate with each other? Which technologies will be responsible for which functionalities?
Sketch a preliminary architecture diagram.)
       Front End: HTML, CSS, JavaScript
       Back End: C++, Python, SQL
Backend takes the account information from the front end and stores it using SQL
Searches known users for a match from login information.
C++/Python will create the vector map where the user will move around. The randomly generated asteroids and black holes will be stored on the grid.

9. **Use Case Diagram**(Identify a minimum of 3 actors and 15 use cases for your project. Create and attach a use case diagram to depict them. You may change these at a later point in time as suited.)

Actor: New Player(No account created)
Use Case: Start a new game (left hand side two actors (new player & returning player) connect to elipse
Use Case: Search Levels
Use Case: Quit the Game
Use Case: Options
Use Case: Mute Music
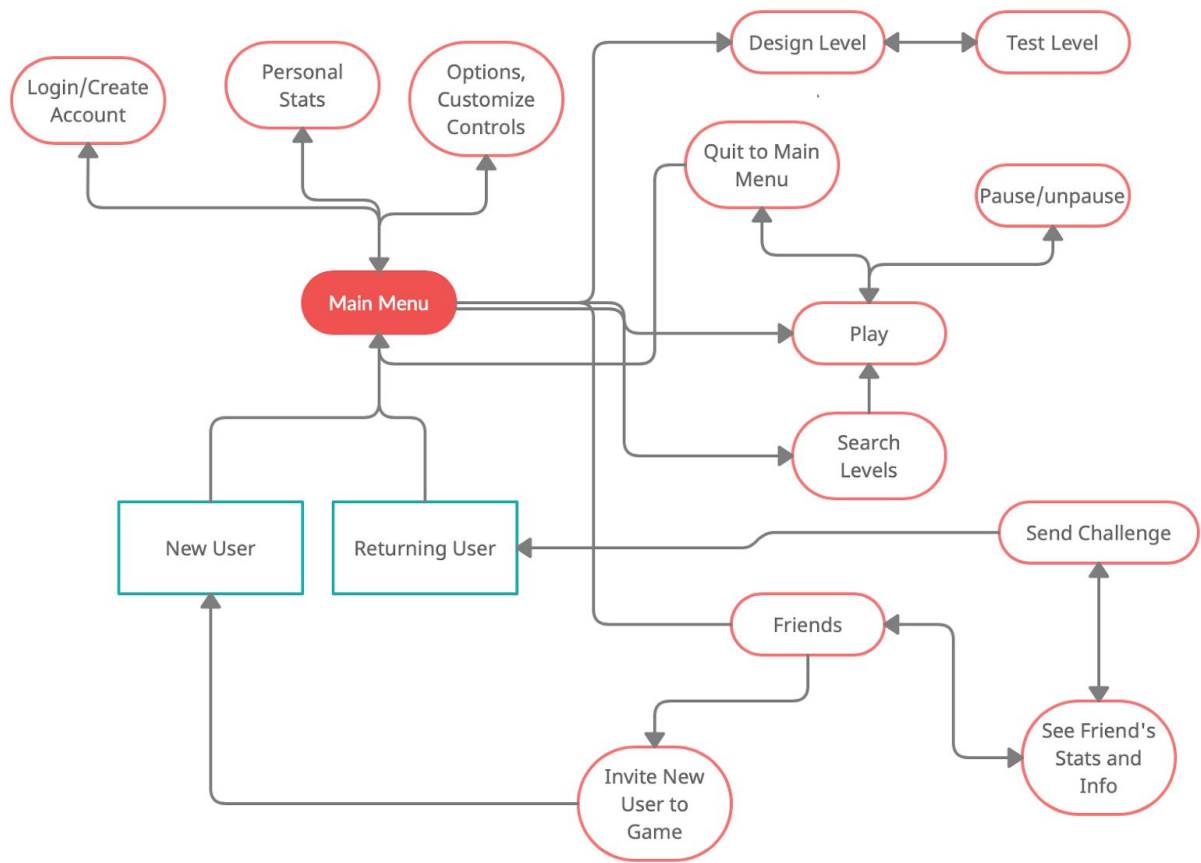Use Case: Pause
Use Case: Start the Game
Use Case: Quit the game
Use Case: Design new level

Actor: Returning Player(Account exists)
Use Case: Display high score
Use Case: Invite friend

(made with Creately)