

# SpacePort

A Discord MMO-RPG

Document Version 1.0

**IMPORTANT NOTE:**

SpacePort is currently planned to be a Discord Bot Application that uses chat commands to interact with the game. However, the application is designed in such a way that it could be ported to a Discord Activity, if chosen as a contest winner.

# Introduction

SpacePort is a massively multiplayer idle/background role playing game that plays out entirely through Discord's text channels. Players can join battles, collect items, upgrade their equipment/ship, trade or fight other players, and join server-wide events, all while trying to make their own planet as wealthy as possible! SpacePort is designed to be a laid-back experience played over a long period of time, with the player making small actions each day rather than playing for long sessions at one time. The game will be driven by an in-game economy that prioritizes communication/collaboration with other players to succeed.

## Who Are We?

SpacePort was designed by a team of three software engineering graduate students. We have previous software experience working for companies such as NASA, Honeywell, Garmin, and Collins Aerospace. We also have a large passion for making games and fully believe that we could bring SpacePort to life if selected as a contest winner.

## Why Discord?

Based on the scope of this project, this seems like something that could be expanded to a full game. So why Discord? This game has been designed from the beginning to make use of Discord's unique features and its place within the gaming landscape. A major problem that many games in the role playing genre face is attracting new players and long term player retention (this is especially true for "idle" games). Since the game plays out within Discord's text channels, there is a very low 'barrier of entry' for potential new players. This also allows the game to be marketed towards Discord users on a large scale, since they will be able to view existing players' interactions with the application in any server that has invited the application. Players can join the game by typing a single command and are not required to make additional accounts or install anything additional to play.

Discord as a platform is designed to be run in the background, which we believe fits perfectly with the intended way to play SpacePort. We are also able to utilize Discord specific features such as Direct Messages, Friend Lists, Polls, etc. to enhance the player experience. Lastly, as your SpacePort data is tied directly to your Discord account, players can play with any device that supports Discord. Players can even return after long periods of inactivity and resume exactly where they left off, without ever having to convince the player to 'reinstall' anything.

## Funding Allocation Plan

Currently, SpacePort is still in the design / early implementation phase. With funding, the team will be able to dedicate time to the game's active development, as well as offsetting costs required to store all of the players' data. We would also allocate some of the funding to have high quality assets created for the game (none of us are artists!).

## Acknowledgements

As SpacePort is still in active development, all claims made within this document are not final and are subject to change as we work to further balance each system within the game. Our goal is to deliver a game that feels fun and rewarding to all types of players.

All art used within this document is not final and simply meant to convey the ideas as described within the text. All art used in this document is intended only as a place-holder, and was acquired from the following locations:

Generated Planet - from creator "Deep-Fold" at the following link:

[\[https://deep-fold.itch.io/pixel-planet-generator\]](https://deep-fold.itch.io/pixel-planet-generator).

Player Character - from creator "Seliel the Shaper" at the following link:

[\[https://seliel-the-shaper.itch.io/character-base\]](https://seliel-the-shaper.itch.io/character-base).

Spaceship - from creator "Fearless Design" at the following link:

[\[https://fearless-design.itch.io/tiny-ships-free-spaceships\]](https://fearless-design.itch.io/tiny-ships-free-spaceships).

At the time of writing, the SpacePort application is not guaranteed to deliver on any of the claims made within this document. Additionally, please reach out to us if any information contained within this document or the SpacePort application is in violation of the Discord Terms of Service, Developer Policy, or the Discord App Pitches 2024 contest rules. We would be happy to fix any issues and resubmit if needed.

# Gameplay

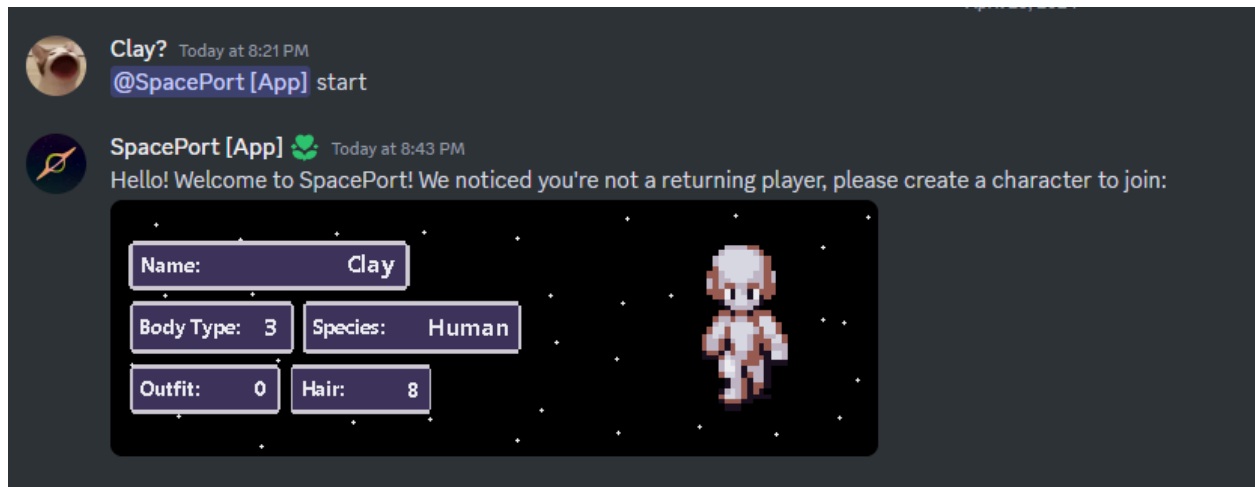
Each unique Discord account will be able to register for SpacePort. Each account can only have one character associated with it. To join, a discord user must:

- Be on a server which currently has the SpacePort application integrated.
- Type “@SpacePort start” within one of the server’s text channels.

Players will then be prompted to make a new character. This character will be tied to the Discord account that created it and will maintain the same items, attributes, etc. across all servers. The user will not be required to input any outside information (such as a username, password, or payment information) and will never be asked to login, as all sensitive user data is tied to the Discord account itself, and not collected by SpacePort.

## Character Creation

New players will initially be prompted to create a new character before playing. The player will then be able to set attributes such as name, species, body type, appearance, etc. A high number of customization options will be implemented to ensure that all players feel represented within the character creator. The player’s planet of origin will automatically be set to the planet of the server in which they first started playing the game. Currently, all options are purely cosmetic, but this could be altered in the future (possibly in the form of a “perk” system).



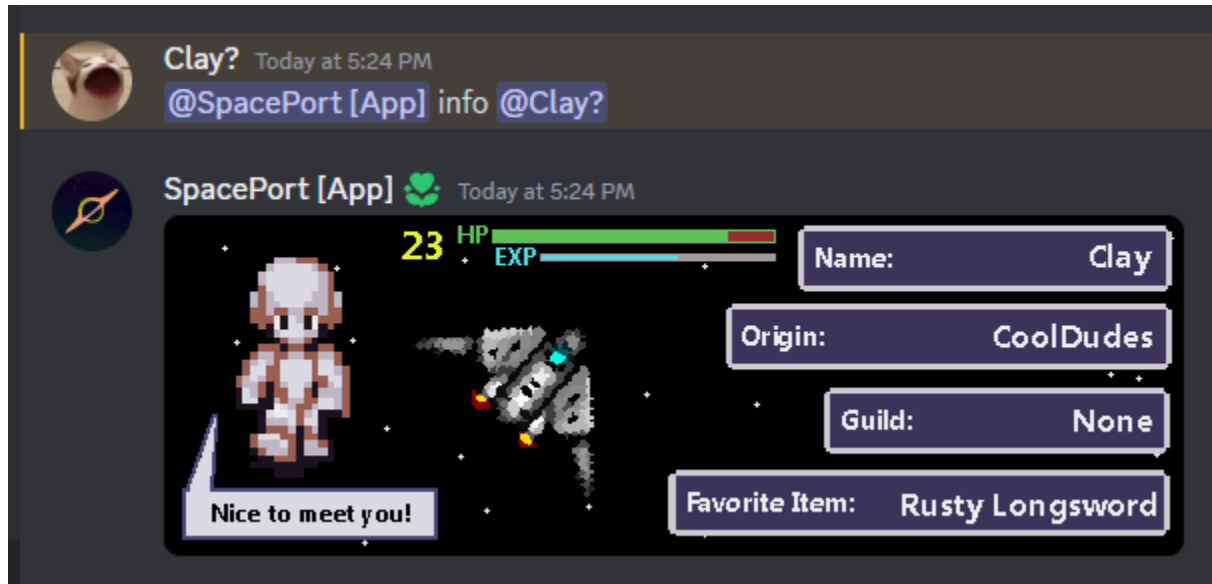
## Resource Collection

A new player will always begin on an already inhabited planet. Players can pick from different tasks to perform in order to gain money and resources. These resources can then be spent, traded, or crafted to help the player advance. Once a player owns a ship, they can then leave their starting planet and visit other planets. Other planets allow players to access resources not found

on their own planet, as well as many other possibilities to help the player (see the Planets section for more).

## Player Communication

To view another player's information, a player can type “@SpacePort info @<player name>”.



SpacePort does not offer any unique way to send messages to other users nor does it offer a Friend's List, as players are intended to use Discord's native messaging and Friend's List features. All communication between players is handled by Discord's moderation system, and is automatically subject to all of Discord's pre-existing rules and requirements. However, SpacePort does offer Guilds and Parties to facilitate collaboration between players.

## Inventory

All players will have access to a private inventory. This will be an intentionally small amount of space for items, to encourage the use of a home planet as a more permanent storage. Players can view their inventory by typing “@SpacePort inventory”. However, the return message will be sent as a Direct Message from the SpacePort application, as a player's inventory should be viewable to only them.

## Trading

Players have the ability to trade with one another. To start a trade, a player can type “@SpacePort trade @<player name>”. The chosen player will then receive an invitation to trade. If accepted, the SpacePort application will send a Direct Message to each player allowing them to select items from their inventory. Once both players have selected their item(s) to trade, the SpacePort application will send a public message in the server that the trade was started in. This message

will show both item(s) that are being offered, and both players will have the chance to accept or deny the trade. If one player denies, then the players are each sent another Direct Message to try again. If both players accept, then the trade will be completed successfully. However, normal trades will incur a tax from each player, if the trade is not completed on a planet that has an active Trading Post (see the Structures section for more information). Both players also have the option to cancel the trade at any time by responding “@SpacePort trade cancel” before both players have accepted the final offer.

## **Guilds**

Players are able to start a guild once they have met certain requirements. Guilds start with between three to five players. A guild contains a guild level, which increases as players who have joined that guild complete tasks. Guilds do not belong to one planet, and any player can join or leave guilds at will. A player can request to join a guild and the guild’s leader can approve or deny the player. Initially, the guilds will serve as a purely cosmetic way to show allegiance with other players. Future functionality may include guild specific quests, structures, or events. Players are able to display their guild beside their name to other players. Players will also receive small benefits when performing tasks with members of their same guild. Lastly, guilds can have a tagline and flag. Guilds are intended to start small and grow/spread to be very large over time.

## **Parties**

Similar to guilds, players are able to join in a party with other players. A party is a temporary form of collaboration that primarily allows players to share certain tasks and resources. Unlike guilds, parties are generally meant to be formed for one time events, and dissolved shortly thereafter. Being in a party with another player allows you to perform additional actions and view more information about them than would generally be accessible (such as their current planet, current action, health, etc.).

# Planets

Individual planets are binded to servers. Each server can have a singular planet that is unique to that server. Servers must reach certain requirements to have a planet. Planets allow players to perform a variety of tasks, and some planets have unique opportunities that others don't. Players can view information about the planet they're currently on by typing "@SpacePort info planet".



## Starting a Planet

In order to start a new planet, a server must meet the following requirements (subject to change due to game balance):

- The server must contain more than 10 active players who have been members of the server for a set amount of time.
- The server must have been created more than 2 months ago.
- At least 5 players within the server must be over a certain level threshold.
- The server must not already have a planet associated with it.

Once a planet is created, players will have the option to set it as their Home planet. It will also keep track of how many players reside on it and how much time has passed since the planet's creation.

## Customization

Planets have some customization options and can have their appearance changed by different things that occur on the planet. All planets are procedurally unique and have a small chance to

have some visual differences such as an altered shape, additional moon(s), or other possible effects.

## Usage

All players on a planet are either residents or visitors to the planet. Different actions are available to a player depending on if they are a resident or visitor. Initially, a planet provides little to its residents besides a place to store items. Mature planets can offer resources and other benefits to players. Most planets will only offer one to two types of resources. Players can spend money / resources in order to gradually increase the usability of their planet. A planet can be boosted by all of its residents, however its benefits are also shared among all residents. Planets that are very boosted (meaning it has many active residents and visitors contributing to it) have the ability to have structures built on them and host events. Planets can also be explored as they mature, allowing players to find caves, farms, or other landmarks. Resources on the planet grow naturally, and take time to regenerate. Players should strive to bring new visitors to their planet, as visitor actions increase a planet's economy, allowing it to upgrade faster.

## Visiting Other Planets

Once a player owns a ship, they enable the ability to travel to new planets. As each planet is tied to a different server, players will need to physically change servers in order to visit another planet. To do this, a player starts on the server they're currently in. They then change to another server that has a planet on it, and type "@SpacePort travel here". The player will then begin traveling to the destination planet. However, travel is not instantaneous and there will be a real-time delay before arrival, depending on a player's ship and other factors. Once the delay is over, the SpacePort application will ping the user from the destination server alerting them that they have successfully (or rarely, unsuccessfully) landed on the planet. Once a player has landed on a planet, they are free to carry out actions normally as a Visitor. Players can then return to their home planet by typing "@SpacePort travel home" in their current server or by manually switching to the server which contains their home planet and typing "@SpacePort travel here". Players receive a reduced real-time delay when returning home. However, all travel uses fuel, which the player will have to pay for.

## Events

Fully mature planets that meet active visitor requirements are eligible to host events periodically. Events can be posted within the server and are given a specific date and time. Events incentivise large amounts of players to gather on one server at a time. When an event is hosted, there is a real-time cooldown before another can be hosted on that planet. Current events include:

- Giveaways: Players active on this planet at a set time will be entered in a raffle to win a rare item.



- Bounties: Players on this planet will enter the planet's cave at a set time in search of a specific item drop.
- Resource Charity: Visitors on this planet will be allowed to collect resources from this planet during a small time frame (does not affect resident's supply)
- PVP Tournament: All players on this planet can join a PVP tournament with a large prize to the sole victor (see the Player VS Player section for more information).

## Structures

Fully mature planets that meet specific level requirements can have structures built on them. Structures are designed to bring in more visitors to one's planet. As having more visitors allows the planet to be upgraded faster. Current structures include:

- Trading Post: Allows players to trade with one another with a reduced tax. Residents of the planet can trade with zero tax applied.
- Ship Mechanic: Allows players to upgrade and repair their ship. Residents of the planet receive a discount.
- Shops: Allows players to buy items. Residents of the planet can place their own items in the shop in exchange for a cut of the sale.
- Monster Lure: Monsters spawn more frequently during certain timeframes.

## Residency

Initially, a planet will only have a small number of residency slots. Visitors who have spent a set amount of time on the planet (or were present in the server at the planet's origin) can request a residency on the planet. The planet's founder will then be able to approve or deny a new resident. Founders are incentivised to recruit as many residents as they can fit, as actions performed by residents of a planet increase its level. Once a set level is reached, the planet will allow for more residents to move onto the planet.

## Caves

As a planet matures, players are able to explore more of a planet's surface. On each planet, there is a chance to find caves. Caves are one of the main incentives to exploring a planet as they provide the most resources and possible items. Caves are also the main area in which the PVE battles take place. Players are encouraged to join each other in a Party before exploring a cave (see the Parties section for more information).

# Battles

A major focus of the game will be on battles that take place between the player and various monsters that can be found throughout the game.

## Rules

Battles take place in a turn based order, with the player being able to select from predetermined options. The player can attack with their weapons, use an ability (if they have one), use an item, or flee. The battle is sent as an embedded Discord message, and the player is able to click 'react commands' to choose their option in battle. The message will then be edited to show the effect of battle and allow the player to make another choice. Battles will be viewable by all players in the server, but only the player currently in the battle can interact with it. If the player flees, they have the chance to lose money or resources, but do not die. If the player loses all of their health, they are removed from the battle, lose money/resources, and receive a small delay before they can perform any actions.

## Random Encounters

Once a server has its own planet, there's a chance that a monster will spawn randomly. This takes the form of the SpacePort application sending a message alerting those currently on the planet that a monster has appeared. When a monster is spawned, players who are not currently performing another task can fight the monster by typing "@SpacePort fight here". Only the player who responds to the message first will be able to fight, so players are incentivised to watch the chat closely if they're looking for a certain monster. The types of monsters that spawn are dependent on multiple factors including current time, planet type, server size, etc.

## Cave Encounters

Similar to random encounters, monsters will also spawn while players are in a cave. In contrast, these monsters will be much harder and if the player flees, they will be removed from the cave with no reward. Cave encounters can also include multiple players. In this scenario, all players will choose their action at the same time, but the turn order will be based on character attributes. Players must be in a party together and in the same location (planet surface / caves) in order to join the same battle.

## Durability

Weapons, and some items, are subject to durability. This means that they have a limited number of uses in battles and will break eventually. This incentivises the players to use different weapons and items during their playtime. New weapons can be found or crafted with resources. There are also resources which allow you to repair your weapons partially. Weapon resources may be tied

to a specific planet biome, a specific enemy, etc.

### **Player VS Player Battles**

Though not planned for the current implementation, the Battle system is designed in such a way that players could eventually have the ability to fight against one another.

# Challenges & Constraints

This section describes possible challenges that will arise during the game's development

## **Economy**

As with most massively multiplayer games, SpacePort will have to maintain a tight balance between its quests, battles, and items. If a quest gives too high a reward, or an item is too strong, this can introduce imbalance to the game's economy. These scenarios are fairly common within the genre. But if the developers are unable to rebalance the game's economy in a satisfactory manner, the game will begin to lose players. This means that, in addition to adding content to the game, there will also need to be someone who specializes in ensuring that no parts of the economy remain off balance for too long.

## **Player Data**

SpacePort is designed to be playable by hundreds or even thousands of players at the same time. This means that substantial time must be spent in developing an architecture capable of handling a large amount of user requests. Requests must be handled in a timely manner and protected such that no player data is ever corrupted or otherwise inaccessible for any reason.

# Conclusion

SpacePort began as a passion project worked on in between our homework and other obligations. It stemmed from the idea of wanting something to enjoy with everyone on our Discord server, even our friends who don't often enjoy video games. SpacePort is something that anyone on Discord can join into and immediately start making new friends and forming new communities.