Key

- Half implemented

- Complete

-Work on this

# Gameplay

* Planet Terrain Generation
  + Land and Water
  + Seamless Material/Texture
  + Clouds/Atmosphere
* Solar System Generation
  + Procedural Planets
  + Moons
  + Multiple to create Galaxy
* Creature Generation
  + Sprites to show creature
  + Procedurally generate creature depending on Planetary factors and how its evolving
* Planet Stats
  + Temperature
  + Planet Composition - what elements it is composed of
  + Planet Age
  + Number of different creatures live on the planet
* Genetic Algorithm
  + Will evolve based on what the creature’s stats are, how it compares against other species and what features give it better chances to live
  + Can influence genetics through points that are achieved by surviving and beating rivals
  + Mutations can occur randomly but some mutations can be removed later or bought through the points gained
  + Beat certain milestones to progress through the game
  + Mutation types – physical, mental, biological
* Information/current affairs
  + See main rival on planet
  + Get notified of achieving certain milestones e.g getting past cellular level, achieving space travel
  + Disasters natural or imposed by a creature
  + Planet can become barren due to global warming or over consumption of certain elements(Can prevent this through colonising other planets + moons or limiting the creation of certain objects)
  + Creature can invent certain objects, will be able to decide how many resources can be applied to create certain objects, resources will be gained through imning elements on planet
* Interstellar + Interplanetary Travel
* Alien Species
* Terraform
  + Can influence home planets stats by improving with planetary points (mainly to help influence creature in initial stage). To help terraform colonies on other planets will be through certain tools that the creature can invent
* Early game will consist of influencing the creature until it reaches the stage in which it is competing with itself
* Mid game will be focusing on a certain country to reign supreme to conquer planet
* Late game will be about expanding in space, terraformiing and establishing contact with alien planets. Also will need to manage internal conflicts due to different factions developing

# Menus/Creation

* Main Menu
  + New Game
  + Load Game
  + Settings
* Planet Creation
  + Planet Name
  + Generate Planet
  + Show Planets stats/composition
* Creature Creation
  + Creature Name
  + Cell Generation
  + Choose Base Colour-show most survivable colours based on planet stats
  + Choose creatures main way of consumption (Herbivore, Carnivore, Omnivore, Synthesis) - changeable during game
* Customise Difficulty
* GUI
  + Genetic/Mutation tree for upgrades
  + Display name of planet and creature
  + Planetary Upgrades(Early Game)
  + Planetary Stats
  + Creature Stats
  + Creature Viewer(2d sprite that is procedurally generated depending on how its evolved and current planet)
  + Dominant Species and Rival Species
  + Speed up time
  + Current Year
  + Invented objects – can allocate resources to them
  + Late game
    - Manage Space Travel
    - Planetary Colonies for different functions(Mining Colonies and Residential Colonies)
    - Mining Colonies can supply resources for other planets
    - Countries will compete against others- will be able to select/influence what country will prevail to conquer the planet before space stage
    - Manage diplomacy with other intelligent lifeforms in game and manage internal factions diplomacy that can develop in interstellar empire