CIT 340 Deliverables 1

GitHub URL : https://github.com/ZacharyAndrews96/CIT340FinalProject

Game: Space Trucking

Genres: Management, RPG

Setting: Space, Year 2200

Lore: In the Year 2200 Mankind began expanding thought-out the galaxy. With this expansion gave rise to a greater need for the transportation between the many colonies of mankind. Will all these expanding colonies be able to stay peaceful to the United States of Earth or shall new power(s) rise to challenge the Earth.

Inspiration:

Endless Sky Developed and published by Michael Zahniser

Off World Trading Company Developed by Mohawk Games and Published by Stardock Entertainment

Features:

Short List

* Procedural Galaxy Start
* Resource Production Chains
  + EX: Mine -> Refinery -> Factory - > Consumer
* Automatic Development of worlds
  + EX: Goes from Mining/farming to Industrial
* Relations between Planet Governments and other corporations
* Variety of ships that fit different roles and are upgradeable
* Turn based battles (enemies can be pirates or enemies in the civil war)
* AI Traders that will Help shape the galaxy
* Events –Some Random other with triggers
  + EX1: Not enough food Causes a Riot Event – Trigger Event
  + EX2: People Craze over Good X – Random Event
* Victory Object Survive until retirement with a nice government Nest Egg.
* Loss Condition(s) end the game without a Stable nest egg
  + Unstable conditions:
    - Active Civil War
    - Nest Egg Value is less than 1 billion Credits

Long List (Detailed check list):

(this is mainly to organized what needs to be done to individual aspects)

**Legend**: D = Data Object, Sp = Sprite needed, U = Unity Scene, M = Menu View within a Scene

* Resources
  + Farm Products - D
    - Corn - SP
    - Grain - SP
    - Cotton - SP
    - Cattle - SP
  + Minerals - D
    - Iron - SP
    - Coal - SP
    - Gold - SP
    - Copper - SP
    - Oil - SP
  + Components - D
    - Ingots – Don’t need to list the mineral types - SP
    - Commercial Parts - SP
    - Military Parts - SP
  + Finished Goods - D
    - Finish Goods will have a quality aspect
      * Higher quality means less gets consume
      * Values
        + Low = 1
        + Medium = 3
        + High = 5
    - Weapons - SP
    - Ammo - SP
    - Commercial Goods - SP
    - Fuel - SP D
    - Clothes - SP
    - Processed Foods - SP
    - MREs - SP
* Views (Some of these can be described/implemented as levels/scenes)
  + Planet Window - can’t decide if I want this to be a Unity Scene or simply a menu
  + Trade Window - M
  + Galaxy View - U
  + Corporate View - M
  + Ship View - M
  + Battle View - U
* Buildings - D
  + Farms - SP
    - Production for Farm Products - Each building will produce one product and be locked to that product
  + Mines - SP
    - Production for Minerals - Each building will produce one product and be locked to that product
  + Foundry - SP
    - Processing of most Minerals into their ingot form
    - Not sure if they should be able to process multiple ores or locked to one
    - If can process multiple ores the spawn rate will need to be reduce greatly
  + Refinery - SP
    - Turns Oil into Fuel
    - Thinking of have this spawn at a lower rate compared to other buildings
    - As this can be a good driving point for events
  + Factory - SP
    - Turns either ingots into components
    - Or turns components into Finished Products
    - These building will be locked to their production
      * They can change but with a special trigger event
  + Shipyard - SP
    - Special Building that allows for Ships to be bought and upgrade
    - Needs All Ingots and Fuel to run
    - Can’t buy /upgrade with a shortage.
    - If shortage will not consume
* Events - D
  + Trigger
    - Shortage – Good runs out – prices increases
    - Riot – Finished product runs out for a while – creates instability
    - Energy Shortage – Runs out of fuel – Creates major instability
    - Robbed – Land on plant with low stability – lower the stability higher chance
    - Unrest – Starting Event for the end game Civil war
      * Needs so many colonies to exist in the galaxy
      * Needs Low stability from shortages
  + Random
    - Popularity event – Consume more of that good – Not Military Goods
    - Colder Winter – Consume more Fuel
    - Military Exercise – Consumes more military goods – Not just one good
* Government - D
  + Stores Data
    - Resources
    - Buildings
    - Population
    - Relations
    - Stability
  + Check for events
  + Will issue quest if the government thinks it will run a shortage - D
    - Lower the stability the higher the reward
  + Tick()
    - Every month each planet will run the Tick() on the buildings then its own version of Tick()
    - This will attempt to consume resources and produce Resources
    - If there is a shortage triggers an event
* Galactic Governments
  + One will spawn at the start of the game – United States of Earth
  + Another or possibly more latter in the game to create the civil war
  + Mainly used to decided who is friend and foe to the AI fleets
  + But will be used by the player to fund their retirement plan
* Ships
  + Main types will be civilian and military ships
  + Ship classes will be fleshed out around/after the prototype but here is a short list
  + Civilian
    - Cargo Shuttle – Small but fast
    - Cargo Ship – Balance between space and speed
    - Cargo Freighter – Massive Space but lower speed
  + Military
    - Destroyer
    - Cruiser
    - Battleship
    - Carrier
    - Fighter
* AI
  + Trader AI
  + Pirate AI
    - On Galaxy Map
    - On Battle View
  + Civil War AI
    - On Galaxy Map
    - On Battle View
* Victory/Loss Conditions
  + Not having enough for your retirement
    - This can be caused by your retirement plan was with the government that loss the civil war
    - Forced into retirement by due to business going bankrupt while there is still an active civil war
* Make a Central Data Class that can be serialize and stored and on hard drive and be loaded in later