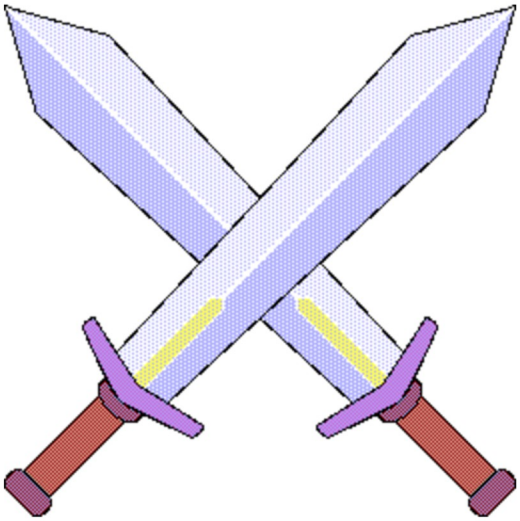
Top-down RPG Game & Engine

A turn based top down RPG made written in a custom game engine



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Engine & Game Overview

The goal of this project is to design a 2D top-down role playing game in an efficient custom engine.

The game itself will feature a short story (details to be decided) with NPCs, enemies, bosses and cut-scenes which showcase all of the engine's capabilities and features in depth.

Game Engine Layout / Finite State Machine

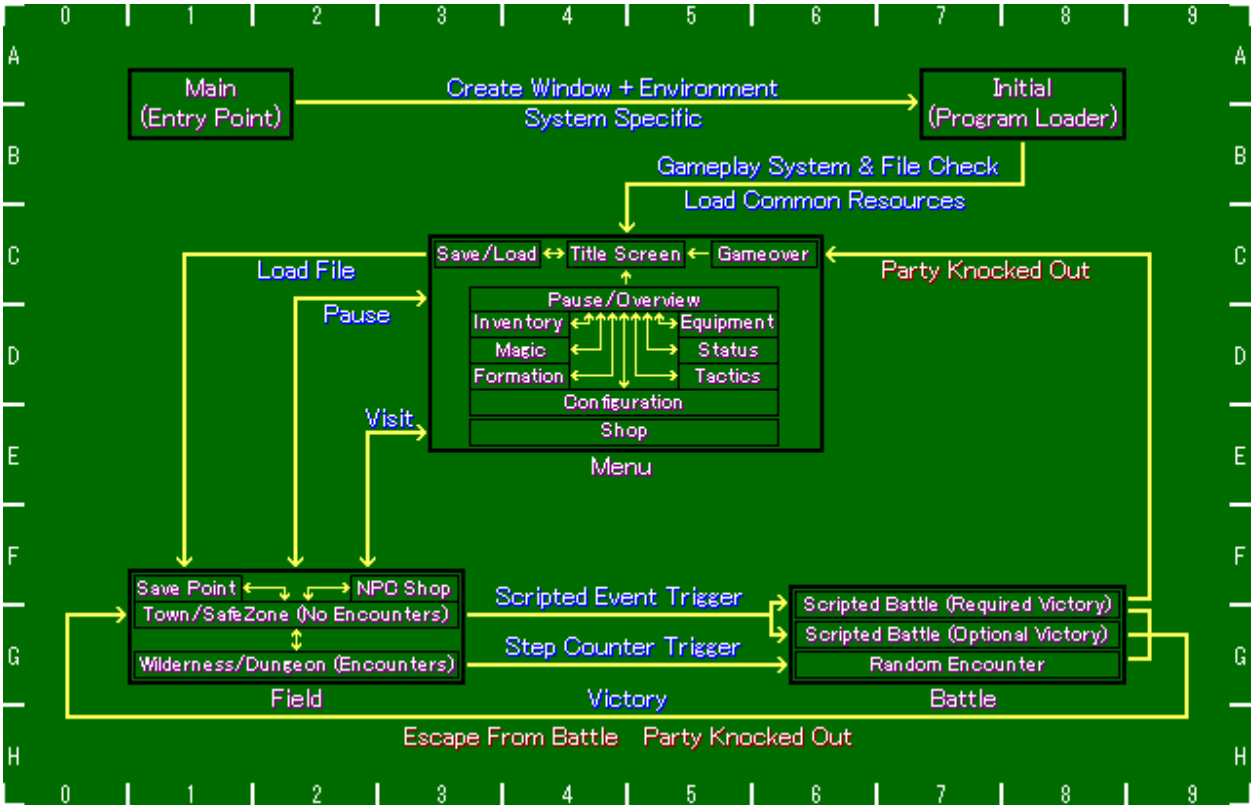

Figure 1 Overview of system interactions

The game engine is made up of multiple modes or "modules" which get switched in and out of memory depending on the situation the player is in, thus saving system resources. One can imagine the interactions shown above as a large Finite State Machine.

Gameplay Mechanics Summary

The gameplay would revolve around completing NPC quests to progress the story while fighting random encounters and bosses to gain experience to level up.

- **A party of 3-4 characters** would be controlled by the player, with each character joining after key events in the story.
    - During quests additional "guest members" may join who aren't controlled by the player but randomly assist the party during battle via heals, buffs and occasional attacks.
    - While the player starts out weak they become stronger through experience gained in battle and equipment found while exploring. Most equipment would be hidden in side areas or behind small puzzles, thus encouraging the player to veer off the main path and investigate.
- **Quests** progress the main story, unlock new areas and occasionally reward items / equipment.
- **Battles** take place in a side-view setting where the player's party stands on the right side of the screen and the enemies stand on the left
    - The player selects actions through menus that appear during their turn
    - A wide variety of actions would be available depending on level, equipment and skills such as Attack, Defend, Magic, Summon, Throw, Counter and Special.
- **Boss battles** are tougher than random encounters and serve as level/strength-checks.
- **Save points** serve as a source of healing outside of battle and before boss battles, hopefully preventing the frustration of going into difficult encounters unprepared.

Special Gameplay Mechanics

- **Turns in battle** would be based on a gauge filling up based on a battler's speed stat. This would make the stat more meaningful than simply determining who acts first as having double the speed stat of an enemy means you get 2 turns for every 1 they get.
- **Healing and Damage** would not affect the player's party immediately. Upon taking damage the player's hitpoints would gradually decrease over time allowing the player to "recover" from an otherwise one-hit-KO move.
    - *Some boss battles would rely purely on this mechanic*, with the enemy having multiple full-party-KO moves thus forcing the player into an intense race to finish the boss off before their hitpoints count down to 0.
- **Status Ailments** would affect the player's party and all enemies (including bosses!) equally. We've all played way too many RPGs where bosses are immune to all debuffs and ailments while also being the only enemies you'd even *want* to use status moves on.
- **Tactics** would be custom *automatic sequences* of actions the player could assign to party members in battle.
    - In an inventory-like editor screen they could combine item-like "actions" and "conditions" to create scenarios like:
        - If [Party Member] Fainted → Cast [Revive]
        - If [Enemy has active Barrier] → If [Current Action is Attack] → Cancel Current Action → Cast [Dispel Barrier]
    - This system would level the playing field between the AI and player in time-gauge based battle systems where the AI can always make decisions faster than the player.
    - By automating simple repetitive tasks the player can gain time in an otherwise fast paced battle to assess the situation more calmly and strategize for upcoming turns.
    - **Grinding for levels or money** actually becomes an *interesting puzzle of optimization*, in which the player must carefully balance grinding speed and resource expenditure.

Visual References

Overall design would be similar to various existing 2D top-down RPG games as shown below

Figure 2: Final Fantasy 6

Figure 3: Final Fantasy 4

Figure 5: Earthbound

Figure 4: Earthbound