U of RPG

Final Presentation

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Overview

- Project Description
  - Goals
  - Prior work/References
  - Technical approach
- Individual Report (role each group plays)
  - Framework, Backend, User Interface, Art, Animation, Sound Design
- Final Product
  - Summary
  - Demonstration
Project Overview
Goals

- Create a 2D role playing game that takes place on U of R campus
- Top-down game w/ simple activities and objectives to progress
- Build without a game engine
  - More challenging
  - Build a greater understanding
  - Utilize several libraries
- Provide a fun game for university students and prospective students as well
- Host game online at www.uofrpg.com
Prior Work/References

- Similar style game to ex. Pokemon
- GitHub
- Dedicated Linux web server
- Parallels Plesk backend management
- HTML5, JS, jQuery, CSS
- Parse (Facebook) database
- EaselJS visual library
- All else built from scratch
1: CORE
- FRAMEWORK
  Provides structural classes and controls how the sections interact with each other

2: FUNCTIONALITY
- USER INTERFACE
  Where the game is displayed and how players interact with the game
- BACKEND
  Manages the database of users and game save data

3: GAME MECHANICS
- PLOT
  Provides story, which dictates the timeline of when all other elements come into play
- ARTIFICIAL INTELLIGENCE
  Controls behavior of enemies and NPCs (primarily during battles)
- PROGRESSION
  Controls the player's progress and how the player gains skills as they advance in the game

4: AESTHETICS
- SOUND DESIGN
  Provides music and sounds to enhance the player experience
- ANIMATION
  Controls movement of anything in the game. Events are created by Plot, and set out to be achieved efficiently by Animation
- ART
  Creates all assets. Ensures everything is aesthetically pleasing to the user.
Individual Reports
Framework

- Libraries
  - EaselJS
  - Tiled
- OOP with “classes”
- Dynamic map code
- Development utilities
Backend

- Database made with hashed passwords
- Game remembers - caches - the user you were logged in a last for auto login feature
- Game data stores progress live and creates analytics unique for each user
- Logout page developed that clears user cache
- Amount of total steps for each user stored in database
- Amount of URos for each user stored in database and retrieved at login
- Created an inventory for your URos in the menu bar
- All of your stats are saved in the database.
- **Everything** you do in the game -> saved -> processed -> ready to be loaded on your next login
AI / Enemies

- Fully featured combat implemented
- 6 Different kinds of enemies, each with different stats
  - Different decision making processes
- Player’s stats increase with level
  - Enemies increase in level as the player does
    - Enemies’ stats scale with level as well
- Combat rewards money
  - Incentive to fight and level up
  - Money rewards increase with enemy level
User Interface (UI)

- Website look and feel
- Container handling
- Menu system and store
- Detailed HUD
  - minimap
  - health bar
  - experience bar
  - temperature support
Art

- When it comes to a game of almost any sort, art is definitely a major aspect that needs to have a good amount of time dedicated to it. Luckily, we have had a couple of members have art be their priority when creating this game.

- Over the past few months, through drawing and editing in various software, we have created approximately 300 unique 32px tiles. These have been assembled into our tiled map editor to create a large and detailed 251 x 218 (that's 8032 x 6976 pixels!) tile map based on the University of Rochester. You will see the scale of the map in the demonstration, but there are some art examples on the next slide as well.

- We have also spent time making sprites based of the games developers! They are shown on the next slide as well.

That black rectangle is the size of the player in comparison to our map!
Art Examples
Sound Design went through various different changes, but we decided on designs that were efficient to implement without subtracting from the feel of the game.
Final Product
Summary

- 2D role playing game taking place on U of R campus
- Built an incredible, dynamic game system
  - Allows for easy additions
- Each group has collaborated well together - combining has been easy
- Challenges
  - Size of project
    - Each group fulfilling responsibilities by deadlines
    - Close to a primitive functioning game
  - Different coding languages
- Incredible learning experience
Demonstration

http://www.uofrpg.com
Questions?