

Third Person Turn-based Game Based on Unreal Engine 4

Oracle of Blade

- Overview

Our team made a turn-based role-playing game named Oracle of Blade with a third-person perspective. We have a complete story line for the game talk about friendship between our main character Ray and sword spirit Vincent. Ray was attacked by monster when he was young, so he practiced hard with Vincent to save the world. Our game has two different ending with only one happy ending.

The player can play the role of Ray when playing the game, and he can follow eighteen main tasks to beat the final boss to win the game. The game happens on four different maps and player can explore anywhere and decide to trigger combat with any enemy in the map, but he cannot move to another map until he beat the boss of the map.

For the combat system, we used traditional turn-based combat system to let player and enemy move turn by turn based on their speed. And we implemented item system and magic system to make our game more complete. Player will earn money after defeating enemies and he can decide to use money to protect himself or to strengthen himself.

Our game is not an easy game, but player can fight with enemy with proper level for multiple times to gain more experiences. The game is about three to four hours long for playing and there are some bonus scene in the game to show designers' idea.

- Game Description
 - Levels

- The first level is the Birth Map. This level includes a cutscene. The cutscene introduce 2 main characters, the first is Ray, whose weapon is a sword. The second is Vincent, who is the spirit of his sword. Meanwhile, it also explained why the main characters start their adventure. After this cutscene, a portal will be created and they can start their journey.
 - The second level is the Water World. This level includes a tutorial, which teaches the player how to play the game. It includes many water monsters(water drop) and some fire monsters(flame ghost). After the player defeats the water boss(blood drop), they can get a water stone, and Vincent can learn water magic(Bead Shower) because of this stone, which can be used in combat system. After that, they can use water magic to cross the water, and a portal which can transfer them to the third level is here.
 - The third level is the Fire World. Many fire monsters and some water monsters are included in this level. As soon as they entered this world, a NPC will tell them in there exists a fire stone which is protected by four fire bosses, and only if they defeat these four fire bosses(Apollo Fire1-4) can they get the fire stone. After they get the fire stone, Vincent can learn how to use fire magic(Fire Boom).
 - In fourth level, they will meet elder again and learned that they can combine water magic and fire magic together to create wind magic(Spiral Press). Then, they can use this magic to fly on the sky into Sky Hamburger, where they can challenge the final boss.
 - Characters
 - Player: The main character controls
 - NPCs: used for quests
 - Merchant: used for trade
 - Monsters: can trigger battle
 - Game Play
 - Combat System
 - Story: It's a story of the main character with his friend to find the power stone, it goes in different worlds to find the secret of his blade.
 - Grow: Level up
- Implementation
 - Game Engine:
 - We use Unreal Engine 4 as our base engine. Although most of us know how to use Unity, Unreal Engine 4 is better for designing a 3D

game. Also, most team members are familiar with C++. Unreal Engine 4 is an engine based on language C++.

- Scripts:
 - We use Blueprints in Unreal Engine 4 to build our game. Blueprint is more straightforward to us. Blueprint will automatically create setter and getter when you create the variable. We can easily use any functions and connect them by lines.
- Algorithms
 - We use many triggers to make the game run what we want it to be. For example, when the main character is close enough to the monster, we transport them to a battle level let them fight with each other.
- Tools:
 - Unreal Engine 4 (Main)
 - Microsoft PowerPoint
 - We use Microsoft PowerPoint to tailor pictures.
- UI Design
 - Pause menu
 - We implement pause menu to show character status such as attributes, backpack, quests.
 - Main menu
 - When the user starts the game, it will show the main menu to make user select start a new game or load game.
 - Battle status
 - When the player gets into the battle scene, it will show all the information we need such as progress bar, enemies status, and who's phase.
- Skills
 - Release
 - The main character can use some skills to fight the monster.
 - Learned
 - At the beginning, the main character cannot use any skill. After he fight the first boss, he will learn how to use water magic.
- Items
 - Backpack
 - The Player can have potion to heal their heal point and panacea to recover his mana
 - Trade system

- There is a trader you can trade with him to buy some potion and panacea.
 - Combat System
 - Combat system contains item system, magic system and escape function.
 - Animation
 - Plot Design
 - Game Balance
- Features Accomplished
 - Designed water map with triggers, fire and final map with some blocks which can be eliminated after certain story, battle map with the appearance of whose background wall could be dynamically changed according to the view the player saw in the previous level before in battle.
 - Implemented some cute characters with vivid actions such as the hero, the sword spirit, the elder, the merchant, the task announcer and the monsters.
 - Designed an interesting storyline and made animations and dialogue accordingly.
 - Self-made and modified some magic effects which can be released in the battle system after corresponding action of players.
 - Implemented UI of pause menu including sub menu of character status where skills will be set visible according to the storyline, backpack and plot where players could recall the previous story.
 - Implemented trade system where player can buy items in store, use and sell items in backpack. When player is close to the merchant and press E, the store interface will be visible.
 - Implemented the turn-based battle system
 - Implemented the level system where after the battle victory, players could gain rewards and were levelled up.
 - Implemented a system menu where players could start, quit save and load game.
 - Made some task triggers which guided the new players to get involved the game.
 - Implemented the UI for battle where real-time status of the enemies and players could appear, and could indicate whose phases in next four turns and whether players win or lose a battle.
 - Made the controller for players to choose action in battle and gave the description for skills.
 - Designed the game balance, set players and monsters attributes.

- My Contribution
 - Designed the overall plot.
 - Self-made and modified some magic effects which can be spawn in the battle system.
 - Designed fire and final map with some blocks which can be eliminated after certain story, battle map with the appearance of whose background wall could be dynamically changed according to the view the player saw in the previous level before in battle.
 - Designed UI of character status and backpack in pause menu, and real-time battle information.
 - Implemented trade system where player can buy items in store, use and sell items in backpack.
 - When player is close to the merchant and press E, the store interface will be visible.
 - Set skills will be visible in the character status interface according to the storyline.