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CS447: Computer Game Design
Fall 2021

Project 2: Dracula Punch

Game Overview:

1. Dracula Punch will be a tile-based, scrolling-world, multi-player slasher where the players work together to get to Dracula's castle by defeating monsters and vampires on the way and exploring a large map.
2. The game will have an isometric projection view, with the camera following the main player. Dracula Punch will be in the dungeon crawler genre.
3. The player's objective is to survive the path to Dracula's castle and defeat all the monsters they encounter on the way before finally facing off with the final boss: SS Dracula.
4. Visual entities in the game will be: Player characters, enemies of various types (melee and ranged)
5. Interactions will include ranged and melee attacks between the player and the enemies. The final boss will also have both ranged and melee attacks, potentially with a special ability. Players will be able to acquire power-ups and items to advance through the game depending on how many high bar goals are implemented.
6. This idea will be thematically interesting because Dracula and vampires in general are familiar and the player knows what to expect. Choosing characters to play as will help the player(s) tailor their experience to their preferences (melee, magic, ranged), and multi-player will add a teamwork element to the gameplay.

Comparison to An Outside Game:

Dracula Punch shares some similarities with Binding of Isaac, such as the interactions between the player and enemies and the exploration of a large map. Dracula Punch is distinct from Binding of Isaac with a scrolling, isometric world map that is not procedurally generated.

Gauntlet is another game from which we took inspiration. The two games have similar core concepts: defeating monsters in a co-op multiplayer setting in a dungeon crawl on your way to an end goal. There are many games that fall into the genre of dungeon crawler, however creating our own twist on it with our own custom player and enemy characters makes Dracula Punch unique.

Development Strategy:

The overall strategy is to get basic functionality of the game setup, then assign individual features to each team member and collaborate on features that have a lot of overlap between them. Minimum viable product is the goal of the first phase of the project. This will be broken up as follows:

Ritta: Scrolling World, Tiled Map

Amanda: Multiprocessing/Networking

Austin: Isometric, 3d Models and Animation, Assist with Multiprocessing

Everyone: Basic game mechanics i.e. player class, enemy class, etc.

The above features are expected to be complete before the first status report on November 15th with the exception of networking. Since none of the members of the team have any experience with networking beyond CS360, we expect this to be a potential sticking point and to require extra time.

After this milestone is reached, the next core functionality items will be assigned to each person. This will likely include: creating enemies, ranged and melee attacks, health tracking, and pathfinding.

Once these features are complete, the game should be in a playable state and the final features can be added: start screen/character select, game over screen, art, and sounds. For features we have implemented in our project 1 games, code may be reused or modified for Dracula Punch where applicable. For example, projectile bullets for ranged attacks, smooth tile-based movement, and the implementation of Dijkstra's algorithm. We could also potentially re-use AI features from previous game projects.

This covers all the low-bar goals. Time permitting, the team will then choose which high-bar items to focus on.

High Bar:

- ❖ Powerups
- ❖ Items
- ❖ Idle animations
- ❖ Resurrection by teammates
- ❖ Multiple levels

Low Bar:

- Start screen with character select
- Game-over screen
- Multiprocessing
- Isometric world
- Combination of ranged and melee attacks (melee hits when within one tile of enemy, ranged hits in straight line along direction character is facing)
- Health tracking
- Respawn at starting point upon death
- Enemy pathfinding
- 3 enemy types
 - Ranged
 - Melee
 - Boss
- Boss at end
- Tile based movement
- Sounds and artwork

Draft Complexity Rubric:

Features	Points
Scrolling World	20
Artwork	20
Isometric	25
Multiprocess	50
Power-ups*	25
Total	115 - 130

* labeled are high bar items which may or may not be implemented depending on time.

Character Renders:

Austin



Ritta



Amanda



SS Dracula:

