Draco: Mid-Point Check

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Submission Contents

- Mid-Point report PDF: Draco_mid_point.pdf (in .zip file)
- Installer: Draco Team Game-0.0.0-win32.msi (in .zip file)
- Github Link: https://github.com/flbrasington/CS467-Draco-python-game
- Materials from Github: CS467-Draco-python-game-master.zip

Project Status

The Draco team has implemented the core aspects of the game which are climbing and randomly generated levels. After the team finishes up some playtesting which might include having another student or friends playtest the game the team plans on expanding the game. The team's thinking was that the most important part of a game is the user or player's experience. If the basics of the game aren't enjoyable then the project wouldn't be a success. The team is now working on expanding the game to include things to help keep the player engaged and excited to continue working on it.

Currently the player can throw ropes to climb on, throw knives and use a whip. The ropes are fully functional but the knives currently have no effect on the enemies and the whip has no effect on the enemies and graphics and positioning isn't finished.

The enemies start moving when the player gets within a certain distance and stop when the player moves outside of that distance. For most enemies to attack, they must be looking at the player. Ghosts and spikes have different behavior from the snakes and snowmen. The enemies only cause damage to the player if they are in attack mode and the player can lose up to two hearts maximum so there is currently no killing of the player character. Unlike the classic Spelunky game on which this one is based, our spikes are always in attack mode even if the player walks across them instead of landing on them.

The enemies are probabilistically generated with an increasing likelihood of being spawned as the levels progress. Less difficult enemies, such as the green snake, are more likely to be spawned than, say, a yeti. Spikes traps are also probabilistic so that spikes will not show up in the same place in every room. There is a percentage chance that a block will be a spike, a regular block or nothing, lending a randomness to the game and providing a new user experience with each level and playthrough.

User Instructions:

Running The Game:

The dist folder in the project contains a Draco Team Game-0.0.0-win32.msi file that can be installed on Windows to play the game. Once the game is installed, in the directory where you installed it, execute main.exe. If main.exe fails to run properly open up constants.py and change line 59 from
- MENU_FONT = pygame.font.SysFont('Berlin Sans FB', 30)

to
- MENU_FONT = pygame.font.SysFont('Arial', 30)
  Berlin Sans FB can be changed to any font found in C:/Windows/Fonts

An alternative is if you have Python 3 (there have been errors running the game using 3.5 but 3.4 has not had those same issues) and the correct version of Pygame for your operating system installed on your computer, simply running main.py from the project root directory.
> To install pygame go to http://www.pygame.org/download.shtml
> To install python go to https://www.python.org/downloads/
> If you need help see the reference section for download and install videos

Player Controls:
- Movement: asdw and arrow keys
- Hold Shift: Run & jump higher
- Jump/Double Jump: Space bar
- Throw Rope/Knife & Use Whip: Left Mouse Button
- Cycle Items: Right Mouse Button
- Aiming Rope/Knife: Mouse's position
- Climb Rope: w key or up arrow
- Release Climbing Rope: Space bar/Jump
- Menu: Escape Key
- Exit Level: up arrow only. w is not accepted
- Infinite JUMP (not in public game version): U key

Playing the Game:
Currently the game is still under work. The player is spawned on the first level which is currently dirt. The player's goal is to find the exit which is higher up on the different floors. Each level is randomly generated and a new path to the finish is generated randomly which each level. The player has to navigate the to the end of the level while avoiding enemies and obstacles.

Areas Being Worked On

Enemies: Currently the enemies in the game pose no real threat because the player can not die even after taking damage from the enemies. The enemies disappear when the player touches them. The AI for the enemies is also under review. Some of the enemies work fine but others will spawn in air or in platforms. These are a recent addition to the project and are still being worked on by the group.

Sound/Music: The music for the game is working but the songs aren't finalized. The sound effects are currently only for the player walking and running.

Graphics: There are a few laying issues but nothing that is game breaking. For example the player when climbing the rope is behind the rope on not on top. Some of the enemies are jittery and need to be flushed out

Game Menu: The game menu is still expanding. All the current buttons work for the menu but the design isn't finalized and more buttons maybe added in the future.

Levels: The levels currently only contain rooms that are on the path to the exit. Other rooms are going to be added and the room generation will be polished.

Future Areas to Work On

Now that the core of the game has been completed the main focus of the team is to work on expanding the game. Items in the project critical section are areas that the team feels is necessary to have a successful game or product. The non-critical items are areas that the team would like to expand to but might not be able to work on due to time constraints.

Critical Items:
- Intro Level: This would be a basic level that would teach the player how to play the game. The team plans on basing this level on the Nintendo Classic Mario Bros world 1-1.
- Expand to 10 Levels: Currently there are only 3 levels. The team wants to expand that to 9 levels beyond the tutorial level: 3 dirt, 3 castle and 3 ice levels.
- Enemies behaviour: The team wants to polish up the enemies so that the enemies and traps operate correctly, i.e. snakes not flying. The team would also like to experiment with enemies that have more than just basic behaviour.
- Player attack: The Team is planning on adding the ability to attack. The team hasn't decided if the player will use a whip/knife like in the original game or add in the ability to throw dart or shoot a gun. Some play testing will be required.
- Graphics Clean-Up: The team needs to clean up some of the graphics because player can get distracted from the game by jittery graphics or the unpolished nature of the

game. The team member aren't graphic artists but can streamline the few art assets that are being used.

Non-Critical Items:

These items are for expanding the game to help make a more enjoyable experience for the player but aren't necessary for the game to be enjoyable or a success.

- Player Items: These include things that would allow the player to do other activities such as triple jump or fly or anything that would change the basics of game play.
- Treasure/Rescue: The team is thinking about adding some sort of system that would encourage the player to explore and take risks to gain points or money.
- Shop: The team is discussing possibly adding a shop between or in levels that would allow the player to purchase items and allow the Treasure to be redeemed for some tangible item.

References

Audio & Music:

- https://www.youtube.com/audiolibrary/music
- https://www.youtube.com/audiolibrary/soundeffects

Sprites, Images & Graphic Software:

- http://opengameart.org/content/platformer-art-deluxe
- https://www.spriters-resource.com/pc_computer/spelunky/
- Gimp
- Clip Studio Paint

Code References:

- https://www.pygame.org/
- http://pygame.org/docs/genindex.html
- http://programarcadegames.com/

Install video:

- https://www.youtube.com/watch?v=K5F-aGDIYaM&list=PL6gx4Cwl9DGAjkwJocj7vlc_mFU-4wXJq