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CSS450 Final Project Proposal
Jetpack Explorer

One Hero Object.

The hero is a jetpack pilot who will have to navigate a maze with his jetpack.

Supporting Objects.

Treasure items, parachute, walls, and power ups.

Simple or pre-defined animation.

Freefall of jetpack pilot with parachute on, pivot from side to side on parachute.

Object Positioning.

Jetpack pilot will be controlled via keyboard.

Object Visibility.

Will support two views, one is map of entire world; the other will show the jetpack pilot and immediate surroundings.

Object Motion.

Jetpack pilot will move around the world, will be affected by gravity when jetpack fuel runs out.

Object Interaction.

Supporting objects will be collected and removed from the world by the jetpack pilot.

Semantic of application.

The hero is a jetpack pilot who will have to navigate a maze with a jetpack. The hero's objective is to collect all of the treasure items and then escape through some exit. The jetpack may only be fired for a certain period of time before it must recharge. Once the jetpack stops firing, the pilot will free-fall. If the pilot hits the ground at a high speed, pilot will die. If pilot is already standing on the ground, the pilot may walk freely along the ground. There will be power-ups that will allow longer firing time, greater thrust, a parachute, etc. all for one-time use or limited time use.

On the second level of the game the jetpack will fire for a shorter period of time.

Audio support.

When the pilot hits the ground hard, a splat will be heard. When a supporting object is collected a sound will be heard.

Displays for user.

Panning will be supported via map view. Zooming functionality will be provided via a slider.

Suspend/Resume/Reset.

Buttons with appropriate actions will be provided.

User friendliness.

Proper steps will be taken to ensure coherence of GUI.

GUI Mockup: