

Project proposal template

Project Title (Game name): Ice Slide Adventure

1. Game description:

The player controls a character that slides across icy paths in two different environments, collecting gems and avoiding obstacles. The challenge is to navigate slippery surfaces and reach the end of each level without falling off the edge. Points are awarded for each gem collected, and the game includes animations, score tracking, and dynamic lighting effects to enhance the experience.

2. Main character model(s):

Sliding explorer or Penguin

3. First environment models (obstacles, collectibles, target): All models are textured

1. Ice paths of varying widths (slippery surfaces for sliding)
2. Gems scattered along the path (collectibles)
3. Snow piles (obstacles to avoid)
4. Icicles hanging overhead (adds visual interest and possible hazard)

4. Second environment models (obstacles, collectibles, target): All models are textured

1. Narrow mountain ledges covered in ice (challenging paths to slide on)
2. Rare ice crystals (higher-value collectibles)
3. Snow-covered rocks (obstacles to maneuver around)
4. Small avalanches triggered if the player gets too close to certain areas

5. A first person shooter point of view will be implemented. The camera is the player's eye.
6. A third person shooter point of view will be implemented. The camera is behind and slightly above the player (the upper part of the player is visible to the camera).
7. Navigation through the game is done using the keyboard and the mouse:
 - 1- The keyboard keys are used to move and make the player jump.
 - 2- The mouse buttons will alternate between camera views.
8. The score is displayed on the screen.
9. Generation of animations with every user interaction will be implemented:
 1. Character slides smoothly on the ice, with snow particles trailing behind.
 2. Gems glow and make a sound when collected.
 3. If the character collides with a snow pile, a small snow explosion animation plays.
 4. Colliding with Rare ice crystals, Snow-covered rocks' collisions, and avalanche triggers, will make a sound.
10. There is a light source that changes its color intensity and a light source moving in the scene:

German University in Cairo

Media Engineering and Technology

DMET 502 Computer Graphics, Winter 2024

1. **Level 1 (Frozen Lake): Soft, cool lighting with reflections on the ice , changing intensity and translation transformation to create a wintry feel.**
2. **Level 2 (Snowy Mountain): Dynamic lighting with rotation transformation to simulate sunrise or sunset, casting warm colors across the snowy landscape..**
- .3- **when it is dark the character will have a torch above his head**

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