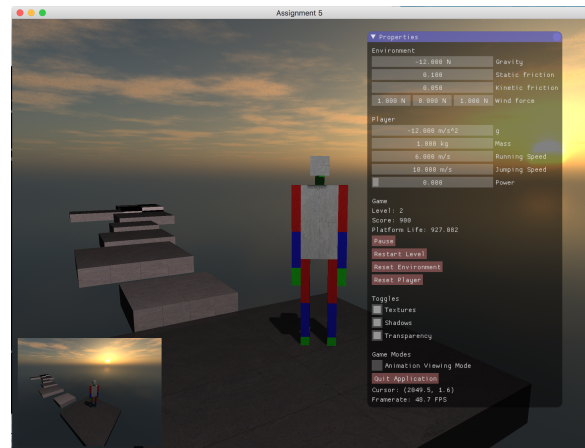


# OpenGL Jumper

Name: Ramanpreet Nara

User ID: 20517713

Student ID: rsnara



Artistic Merit (Polish/Artistry/Humour)

Technical Merit (Algorithms/User Interface/Graphics Techniques)

Difficulty

Code/Documentation/Demo

Mark

Objective Mark:	/10
Subjective Mark:	/6
Total	/16

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## Objectives

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- **1: Modeling the Scene.** - World objects are rendered on to the screen correctly.
  - **2: UI.** - The mouse and keyboard can be used by the player to control the game objects and camera. A GUI also exists for controlling game settings.
  - **3: Texture mapping.** - It is evident that texture mapping has been employed at least once.
  - **4: Keyframe Animation.** - When the player walks, the puppet plays a walking animation. The current frame is interpolated from its surrounding frames using linear interpolation.
  - **5: Static collisions.** - On each stationary platform, the puppet does not fall through the platform and die.
  - **6: Dynamic collisions.** - On each moving platform, the puppet does not fall through the platform and die.
  - **7: Synchronized sound.** - When the player interacts with the game by moving the puppet, there is audible feedback.
  - **8: Physics Engine** - The puppet is subject to gravitational forces (parameter:  $g$ ) and wind force (parameter:  $F_w$ ). The puppet is also subject to static friction when it's standing on a platform. The static friction is a function of the puppet's mass (parameter:  $M$ ) and the platform's normal.
  - **9: Transparency** - Transparency will be implemented using the alpha channel. At least one game object is transparent.
  - **10: Shadows** - Shadows are implemented using shadow maps.
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