**COIS13034**

**Cloud Based Smart Applications Management**

**Assessment 2**

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**1. Requirements Analysis**

The main objective of this distributed system is to create a multiplayer version of the popular Towers of Hanoi puzzle that can be accessed and played by multiple users across different systems. The idea is to allow users to join the same game sessions remotely, to either play together with others or to compete against other users to solve the puzzle as fast as possible. By using a distributed architecture, the system will have real-time interaction between the players, manage shared game state across different nodes, and make sure that the game logic remains consistent even if there is ever any failure such as network delays or node failures. In the long term, the system could also support more features like matching players with similar levels, leaderboards, and accessible globally over the internet to possibly a billion people.