**Software Requirements and Design Document**

**For**

**Group 29**

Version 1.0

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**1.**  **Overview (5 points)**

Mobilympics is a compact app that hosts a number of simple two-or-more player games that allows users to connect to each other using Android’s WiFi Direct capabilities, obviating the need for internet connectivity. Users are able to host or find a lobby, optionally secured with a password, and play each other, collecting medals which are tracked on a leaderboard.

**2.**  **Functional Requirements (10 points)**

1. Main menu - high
2. Lobby info dialogue - high
3. Lobby class - high
4. Leaderboard - low
5. Lobby host activity - high
6. Find lobby activity - high
7. Options activity - medium
8. Tic Tac Toe - medium
9. Checkers - medium
10. Chess - medium
11. Dots and Boxes - medium
12. Mancala - medium

**3.**  **Non-functional Requirements (10 points)**

1. The app will have a good response time - medium
2. Intuitive user-friendly interface - low
3. Secure and encrypted communication - medium
4. We want it to be compatible with older Android devices - low
5. Maintainability (The code is modular and well documented) - high
6. Scalability (It should be easy to add new games) - high
7. Battery Efficiency - medium
8. Data Management (keep data if disconnected, maintain quantity of medals, etc.) - situational based
9. Optional simple animations for games like Dots and Boxes (i.e. a pen drawing) or Mancala (i.e. marbles moving).
10. Graphics for some games like the images for the chess pieces (most of which will be available on android studio)

**4.**  **Use Case Diagram (10 points)**

A diagram of a person

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Hiking, airplane rides, power/internet outages, Idk man have you ever been bored?

**5.**  **Class Diagram and/or Sequence Diagrams (15 points)**

*This section presents a high-level overview of the anticipated system architecture using a* ***class******diagram*** *and/or* ***sequence diagrams****.*

*If the main* ***paradigm*** *used in your project is* ***Object Oriented*** *(i.e., you have classes or something that acts similar to classes in your system), then draw the* ***Class Diagram******of the entire system and Sequence Diagrams for the three (3) most important use cases in your system.***

*A screenshot of a computer

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**6.**  **Operating Environment (5 points)**

The Operating Environment is Android mobile devices.

**7.**  **Assumptions and Dependencies (5 points)**

 We are assuming that the user has an Android phone. They are bored and don’t have access to internet connection. Additionally we will utilize WiFI-Direct for peer to peer functionality in multiplayer games for local connectivity. This will allow users to connect to nearby devices without needing to connect to a hotspot or network.