

Performance Requirements Specification

Mobile Gaming Application

1. Introduction

This document defines the performance requirements for the Mobile Gaming Application to ensure optimal user experience across various devices and network conditions.

2. Scope

- Platform: Android (8.0+), iOS (13+)
- Devices: Smartphones and tablets
- Network: Wi-Fi, 3G, 4G, and 5G connectivity

3. Performance Requirements

Requirement	Criteria	Target Value
App Launch Time	Cold start from tap to main menu	< 3 seconds
Frame Rate	During gameplay on supported devices	≥ 60 FPS
Input Response Time	Touch input to visual feedback	< 50 ms
Loading Screen Duration	From level selection to start	< 5 seconds
Network Latency Handling	During multiplayer matches (Ping)	< 100 ms
Memory Usage	Maximum memory footprint on device	< 250 MB
Battery Consumption	App running continuously for 1 hour	< 8% battery drain
Crash Rate	Per 10,000 sessions	< 0.5%

4. Stress and Load Requirements

- The app must maintain frame rate and response time when 90% of device RAM is in use.
- The app must sustain at least 1,000 concurrent online players per server instance without significant latency increase (< 20% degradation).

5. Compatibility

- App performance must remain consistent across at least 95% of target device models.
- All major screen sizes and aspect ratios must be supported without UI degradation.

6. Measurement and Monitoring

- Instrumentation will log key performance metrics for each user session.
- Performance test reports must be generated for major releases.

7. Revision History

Version	Date	Author	Remarks
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0.1	2024-06-01	Dev Team	Initial Draft
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