**Role: Embedded Developer**

**Project Title: “Open Day Kiosk”**

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**Student ID: 2124101**

**Risk Assessment Report**

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| **Risk** | **Description** | **Likelihood** | **Impact** | **Mitigation Strategy** |
| Distance Sensor Failure | Sensor gives incorrect or no readings. | Medium | Medium | Implement error handling in code; display default message; test sensor thoroughly. |
| Temperature Sensor Failure | Sensor gives incorrect or no readings | Medium | Low | Implement error handling in code; display default message; test sensor thoroughly. |
| LCD Display Error | Display shows incorrect characters or freezes | Low | Medium | Use reliable LCD libraries; test display with various inputs; check wiring. |
| Arduino Code Error | Program crashes or displays incorrect information | Medium | High | Thoroughly test code; implement error handling; use clear comments. |
| Wiring Issues | Loose connections or incorrect wiring. | Low | Medium | Double-check wiring; use secure connections. |
| Incorrect Information Displayed | Open day schedule is incorrect | Low | High | Double check the information being displayed. |
| System Freeze/Crash | Arduino stops responding | Low | Medium | Implement code stability measures; monitor system behaviour during testing. |
| User Confusion | Visitors don’t understand the kiosk | Low | Low | Clear and simple LCD messages, intuitive design. |
| Extreme Simulated Temperatures | Temperature sensor returns unreasonable values. | Low | Low | Limit the range of accepted temperature values. |
| Rapid Simulated Distance Changes | Distance sensor produces unstable readings | Low | Low | Implement smoothing or filtering in code. |