**Risk Register**

**Group 11**

**Outline of the document and template**

Risk description: short description of the overview of the risk and why it’s a potential issue.

Risk category: Operations, Budget, Schedule, Technology, Information, Security, Quality, Project plan

Risk likelihood: Not likely, somewhat likely, likely, very likely

Risk analysis: Very low, low, medium, high, very high

Risk mitigation: response plan, a brief description of how to lessen the risk

Risk priority: 1 (low), 2 (medium), 3 (high)

Risk status: Communicate the status of the task, Open, in progress, and closed.

**Risk identification**

Data loss / Data privacy laws

Description: Documents are not stored permanently on server database; documents will be stored as temporary files or in database and cleared once output is produced. This may lead to data loss if the process is interrupted. Must comply with legal and industry standard data privacy laws for the comfortability of client use of the application.

Category: Technology, Security, Information, Technical

Likelihood: Likely

Risk Analysis: High

Mitigation: Implement logging ensuring data is recoverable or reprocessed in the case of an interruption. Implement error handling for graceful error recovery. Consult client on data handling.

Priority: 3 (high)

Status: Client instructed on not having data stored, must implement security measures for safe data handling.

Security of Temporary files / Vulnerabilities in Web application

Description: Temporary files may be tampered with / accessed during processing. Web application may have vulnerabilities such as SQL injection, and Improper transport layer security.

Category: Security, Information, Technical

Likelihood: Likely

Risk Analysis: High

Mitigation: Using secure isolated environment for temporary file storage, encryption and restricting access. Secure deletion after processing. Validate the input to prevent injection attacks. Implement tokens in forms, use HTTPS, and penetration testing.

Priority: 3 (high)

Status: Discussed with client, in progress.

Bottlenecking

Description: Slow performance when processing many documents or multiple requests.

Category: Performance, Technology, Technical

Likelihood: Likely

Risk Analysis: Medium

Mitigation: Optimize code, performance testing and benchmarking. Asynchronous processing for multiple requests.

Priority: 2 (medium)

Status: Not implemented, Open.

Client Communication & Engagement

Description: Lack of communication with Client may result in unclear requirements and expectations of the application.

Category: Information, Operations, Project plan

Likelihood: Not likely

Risk Analysis: Medium

Mitigation: Regular communication with client, provide progress updates with sprint deliverables and receive feedback to ensure correct requirements and functionality.

Priority: 3 (high)

Status: First meeting went well, received all requirements. Need to determine budgeting and final requirements for next meeting. In progress

Inadequate Testing coverage

Description: Insufficient testing allowing undiscovered vulnerabilities or bugs in the frontend affecting user friendliness, and vulnerabilities in data processing and handling.

Category: Technical, Information, Security

Likelihood: Not likely

Risk Analysis: high

Mitigation: Develop comprehensive testing strategy using, system testing, user acceptance testing, functional testing, integration testing, unit testing, and performance testing.

Priority: 2 (medium)

Status: To be implemented in sprint 3 during the testing of the application. Open

Team skill gaps

Description: Lack of skills necessary for the development of the project within the team. Would lead to quality issues, or delays.

Category: Technical

Likelihood: Not likely

Risk Analysis: Medium

Mitigation: Conduct skill audit and ensure learning of skills required for development of the application. Ensure members are given tasks that complement their skills.

Priority: 2 (medium)

Status: Audit has been completed. Closed.

Change in project scope

Description: Changes in the project scope via client or external factors could lead to scope creep and strain on resources.

Category: Project plan, Schedule, Operations

Likelihood: Likely

Risk Analysis: Medium

Mitigation: Implement a process to evaluate and approve scope changes such as budgeting of requirements. Ensure clear documentation of the project requirements and task objectives.

Priority: 3 (high)

Status: Budgeting of requirements yet to be done, Requirements clearly documented and task objectives available on github. In progress.

Scheduling conflicts & Project management

Description: Unclear leadership could lead to confusion and inefficiencies through clashing of members and tasks. Must have clear project direction and ensure members are working on something in conjunction.

Category: Project plan, Operations

Likelihood: Somewhat likely

Risk Analysis: High

Mitigation: Develop project schedule, ensuring communication between members and tasks.

Priority: 2 (medium)

Status: Github project plan implemented for tasks, tasks in progress, and completed tasks. In progress.

Integration issues

Description: Integration issues if connecting our application with other services. Specifically, may occur when integrating with document storage, third party APIS used in document parsing such as XML or python docx.

Category: Technical

Likelihood: Somewhat likely

Risk Analysis: Medium

Mitigation: Identify all external services or API’s needed for the application. Use standard data formats such as JSON, and XML for interoperability. Implement graceful error recovery to manage failures of communication or data inconsistencies.

Priority: 2 (medium)

Status: In progress.

Third party services – APIS

Description: Usage of API’s or third-party services may introduce unreliability of services change unexpectedly, may introduce unreliability and bugs.

Category: Technology, Technical

Likelihood: Not likely

Risk Analysis: Low

Mitigation: Evaluate reliability of third-party services before implementation / integration. Have a plan in case of failure or disruption

Priority: 1 (low)

Status: Not implemented

User adoption

Description: Client may resist using the new application if the existing application is more useful.

Category: Quality

Likelihood: Not likely

Risk Analysis: Medium

Mitigation: Engage with the client in development to receive feedback and let them guide the needs and wants of the application in the development process.

Priority: 2 (medium)

Status: Feedback to be received in next meeting, based on the example user interface.

Unclear requirements

Description: Aligns with change in project scope risk and client communication, Changes in the requirements may lead to a different product to what was proposed by the client.

Category: Project plan

Likelihood: Not likely

Risk Analysis: Low

Mitigation: Clear documentation of project requirements. Regular reviews and updates of the requirements with client

Priority: 2 (medium)

Status: Draft requirements received, need to be finalized.

Budget constraints (Requirements budget)

Description: Based off of the $100 budget given to the client and assigned to each main requirement for the project. Focusing on the higher priority requirements may affect development of the lower budgeted requirements.

Category: Budge, Schedule

Likelihood: Not likely

Risk Analysis: Low

Mitigation: Implement management practices ensuring that all necessary requirements are completed.

Priority: 2 (medium)

Status: Budget of requirements yet to be done by client.