Storage Connector

Alexandro Bolfa 331500
Steen Krøyer

3241 characters

Software Technology Engineering

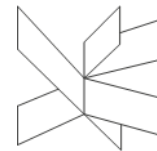**Semester 6**

07.04.2025

Table of content
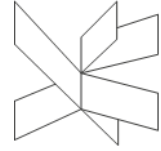
1. Problem Domain

Nowadays people and companies rely on multiple cloud storage solutions such as Google Drive, OneDrive and SharePoint to store and manage their files for having more secure data, less latency, cost efficiency and accessibility from everywhere with an internet connection (Barry, P.). However managing data across multiple platforms can be challenging because of inconsistent interfaces and difficulty in retrieving relevant files efficiently (Gartner). Because of that users often need to switch between multiple services, leading to loss of productivity.

The project aims to address the issue of separated cloud storages by developing a web application that merges and organizes files from various cloud services into a single interface. The application will allow users to connect their cloud services and view all stored files in a single dashboard, streamlining improving access and workflow efficiency.
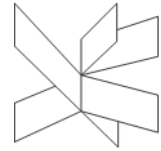
2. Problem statement

Users loose time and concentration when they need to jump between different cloud platforms to find, preview, or open files.

- How can all documents from multiple cloud services be shown together?

- How should the user search and filter across all files in a simple way?

- How can the user's safety and privacy be preserved without complex user experience?

- How can the working flow of the user be preserved?
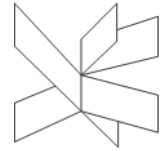
3. Delimitation

This project will focus only on integrating three major cloud storage providers: Google Drive, OneDrive, and SharePoint. Other cloud services e.g. Dropbox and iCloud will not be included in this phase. The application will provide read-only access to files initially. Editing and file-sharing features will be considered for future development. Security measures will focus on OAuth authentication, but advanced security protocols like end-to-end encryption will not be covered in this project.
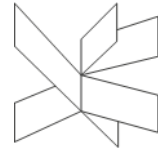
4. Choice of methods

The project will combine Unified Process with Kanban. Kamban guides the day-to-day work with a simple board (Backlog, Ready, In Progress, Verify, Done) and tasks will be completed one at the time. Tasks will only be split further if they exceed the usual pattern of implement, check, note. Ceremonies will be kept minimal: a quick daily board check and a brief end -of -week not on what is done and what is next.

Unified Process will provide the overall structure and milestones: Inception (clarify scope/problems), Elaboration (use case diagram together with use case description and a domain model), Construction (build in small vertical slices with continuous checking), and Transition (polish, remaining documentation, hand-in). This combination keeps the project organized and predictable without heavy meetings or roles.
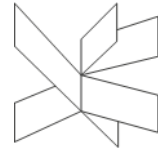
5. Time schedule

27.5 hours per week are expected to be invested in the creation of this project. This means a total of approximately 300 hours. The time schedule will be:

- Week 1-2: Prepare integration setup for Google Drive, OneDrive and SharePoint APIs.

- Week 3: Design UI mock-ups and finalize architecture.

- Week 4-5: Develop backend API integrations.

- Week 6-7: Implement frontend interface and authentication.

- Week 8: Testing, debugging, and final revisions.

- Week 9-10: Documentation and project submission.
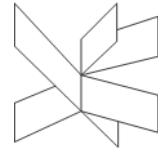
6. Risk assessment

Risks	Likelihood	Severity	Impact Score	Mitigation Strategy
API access limitations	2	4	8	Use alternative APIs or adjust integration scope
OAuth authentication issues	2	3	6	Research OAuth 2.0 best practices and test thoroughly
Delayed cloud provider responses	3	3	9	Allow buffer time in development schedule
UI/UX usability challenges	2	4	8	Conduct early usability tests and iterate based on feedback
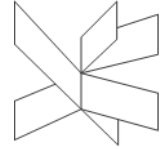
7. References

- Barry, P. (24.12.2023). Retrieved March 21 from Adivi [Why is Cloud Storage Important for Businesses?](#)
- Gartner. Retrieved March 21 from Gartner [Multicloud Strategy](#)