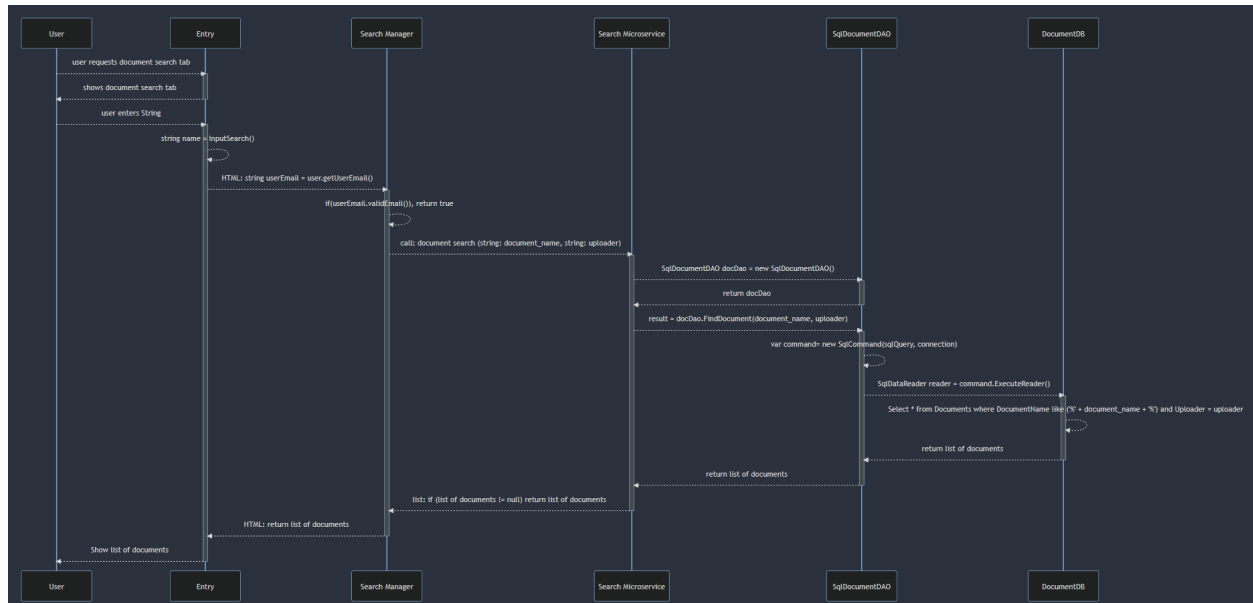


# Document Storage Search

Success 1



sequenceDiagram

User-->>+Entry: user requests document search tab

Entry-->>-User: shows document search tab

User-->>+Entry: user enters String

Entry-->>Entry: string name = InputSearch()

Entry-->>+Search Manager: HTML: string userEmail = user.getUserEmail()

Search Manager-->>Search Manager: if(userEmail.validEmail()), return true

Search Manager-->>+Search Microservice: call: document search (string: document\_name, string: uploader)

Search Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Search Microservice: return docDao

Search Microservice-->>+SqlDocumentDAO: result = docDao.FindDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Select \* from Documents where DocumentName like ('%' + document\_name + '%') and (Uploader = uploader or Shared = uploader)

DocumentDB-->>-SqlDocumentDAO: return list of documents

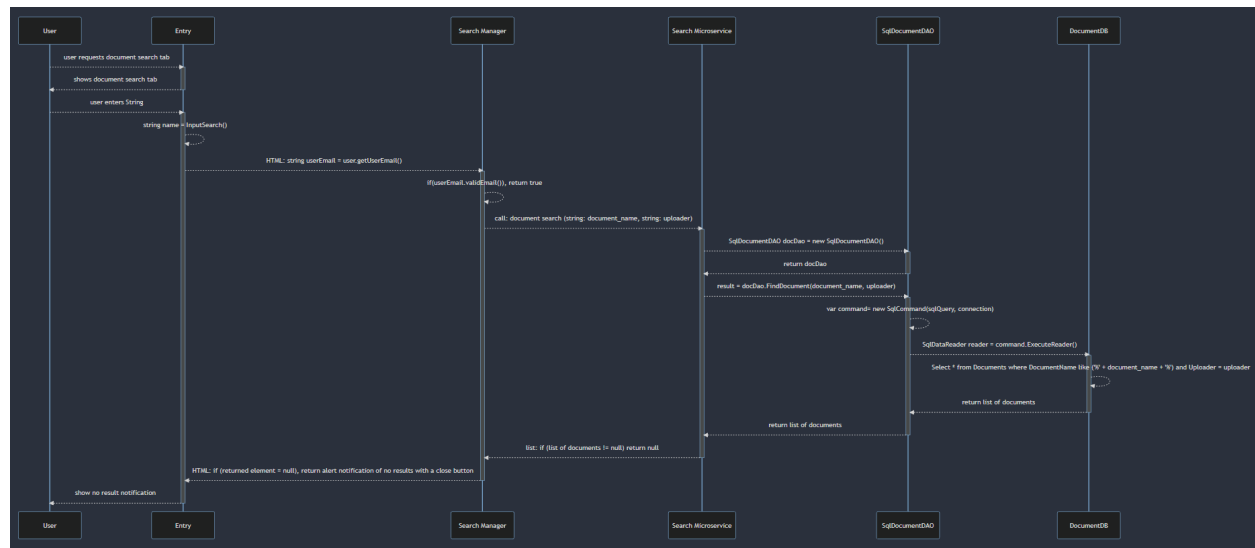
SqlDocumentDAO-->>-Search Microservice: return list of documents

Search Microservice-->>-Search Manager: list: if (list of documents != null) return list of documents

Search Manager-->>-Entry: HTML: return list of documents

Entry-->>-User: Show list of documents

## Success 2



### sequenceDiagram

User-->>Entry: user requests document search tab

Entry-->>User: shows document search tab

User-->>Entry: user enters String

Entry-->>Entry: string name = InputSearch()

Entry-->>Search Manager: HTML: string userEmail = user.getUserEmail()

Search Manager-->>Search Manager: if(userEmail.validEmail()), return true

Search Manager-->>Search Microservice: call: document search (string: document\_name, string: uploader)

Search Microservice-->>SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>Search Microservice: return docDao

Search Microservice-->>SqlDocumentDAO: result =

docDao.FindDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Select \* from Documents where DocumentName like ('%' + document\_name + '%') and (Uploader = uploader or Shared = uploader)

DocumentDB-->>SqlDocumentDAO: return list of documents

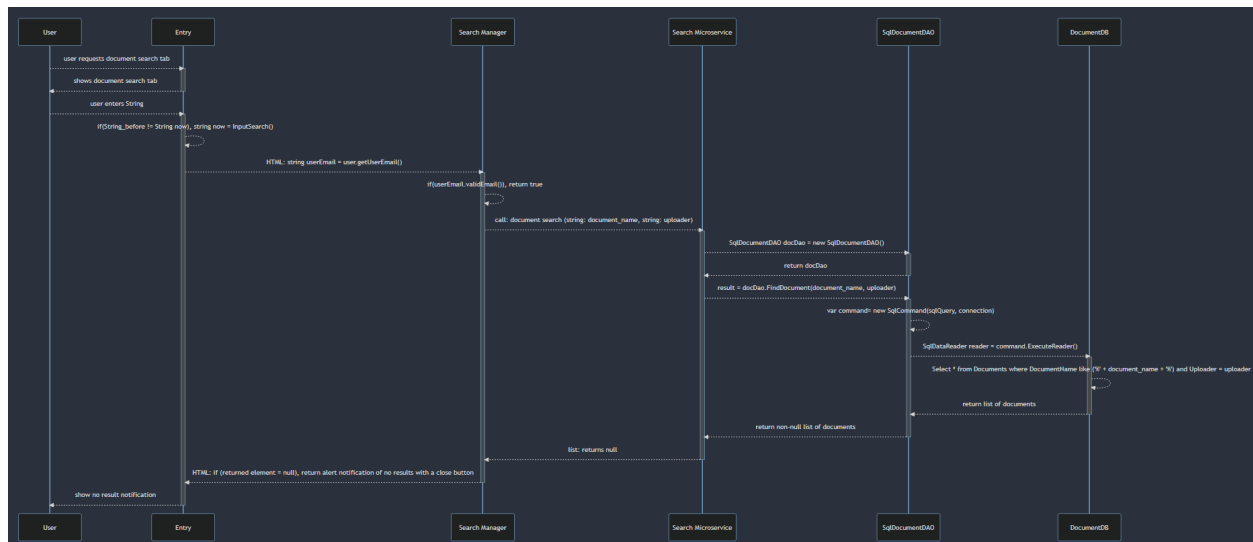
SqlDocumentDAO-->>Search Microservice: return list of documents

Search Microservice-->>Search Manager: list: if (list of documents = null) return null

Search Manager-->>Entry: HTML: if (returned element = null), return alert notification of no results with a close button

Entry-->>User: show no result notification

## Fail 1



## sequenceDiagram

User-->>Entry: user requests document search tab

Entry-->>User: shows document search tab

User-->>Entry: user enters String

Entry-->>Entry: if(String\_before != String now), string now = InputSearch()

Entry-->>Search Manager: HTML: string userEmail = user.getUserEmail()

Search Manager-->>Search Manager: if(userEmail.validEmail()), return true

Search Manager-->>Search Microservice: call: document search (string: document\_name, string: uploader)

Search Microservice-->>SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>Search Microservice: return docDao

Search Microservice-->>SqlDocumentDAO: result = docDao.FindDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Select \* from Documents where DocumentName like ('%' + document\_name + '%') and (Uploader = uploader or Shared = uploader)

DocumentDB-->>SqlDocumentDAO: return list of documents

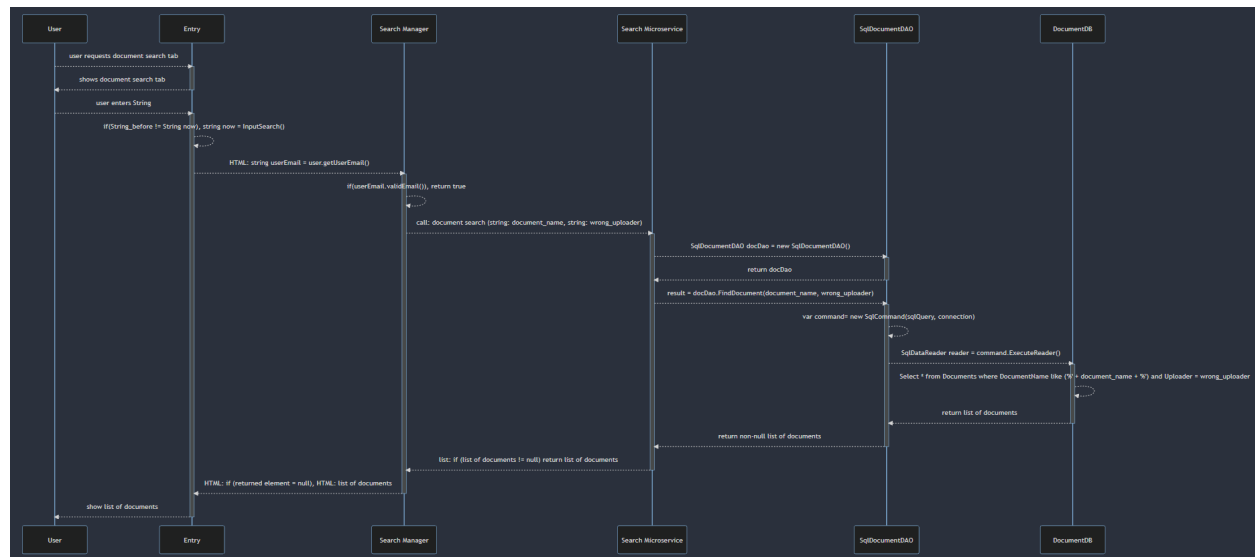
SqlDocumentDAO-->>Search Microservice: return non-null list of documents

Search Microservice-->>Search Manager: list: returns null

Search Manager-->>Entry: HTML: if (returned element = null), return alert notification of no results with a close button

Entry-->>User: show no result notification

## Fail 2



### sequenceDiagram

User-->>+Entry: user requests document search tab

Entry-->>-User: shows document search tab

User-->>+Entry: user enters String

Entry-->>Entry: if(String\_before != String now), string now = InputSearch()

Entry-->>+Search Manager: HTML: string userEmail = user.getUserEmail()

Search Manager-->>Search Manager: if(userEmail.validEmail()), return true

Search Manager-->>+Search Microservice: call: document search (string: document\_name, string: wrong\_uploader)

Search Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Search Microservice: return docDao

Search Microservice-->>+SqlDocumentDAO: result = docDao.FindDocument(document\_name, wrong\_uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Select \* from Documents where DocumentName like ('%' + document\_name + '%') and (Uploader = wrong\_uploader or Shared = wrong\_uploader)

DocumentDB-->>-SqlDocumentDAO: return list of documents

SqlDocumentDAO-->>-Search Microservice: return non-null list of documents

Search Microservice-->>-Search Manager: list: if (list of documents != null) return list of documents

Search Manager-->>-Entry: HTML: if (returned element = null), HTML: list of documents

Entry-->>-User: show list of documents

## Fail 3



## sequenceDiagram

User-->>Entry: user requests document search tab

Entry-->>User: shows document search tab

User-->>Entry: user enters String

Entry-->>Entry: if(String\_before != String now), string now = InputSearch()

Entry-->>Search Manager: HTML: string userEmail = user.getUserEmail()

Search Manager-->>Search Manager: if(userEmail.validEmail()), return true

Search Manager-->>Search Microservice: call: document search (string: document\_name, string: wrong\_uploader)

Search Microservice-->>SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>Search Microservice: return docDao

Search Microservice-->>SqlDocumentDAO: result = docDao.FindDocument(document\_name, wrong\_uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Select \* from Documents where DocumentName like ('%' + document\_name + '%')

SqlDocumentDAO-->>Search Microservice: return non-null list of documents

Search Microservice-->>Search Manager: list: if (list of documents != null) return list of documents

Search Manager-->>Entry: HTML: if (returned element = null), HTML: list of documents

Entry-->>User: show list of documents

# Document Storage Upload

## Success



sequenceDiagram

User-->>Entry: user requests document upload tab

Entry-->>User: shows document search tab requesting pdf to upload (max 128mb), checkbox to click if pdf is not signed

User-->>Entry: user chooses pdf to upload

Entry-->>Document Upload Manager: HTML: POST pdf file

Document Upload Manager-->>Document Upload Manager: if (pdf <= 128mb), return true

Document Upload Manager-->>Document Upload Microservice: call: document upload (bool: signed, string: username)

Document Upload Microservice-->>SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>Document Upload Microservice: return docDao

Document Upload Microservice-->>SqlDocumentDAO: result =

docDao.UploadDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Insert into Documents (pdf\_name, uploader, shared, signed) values (pdf\_file\_name, username, username, signed)

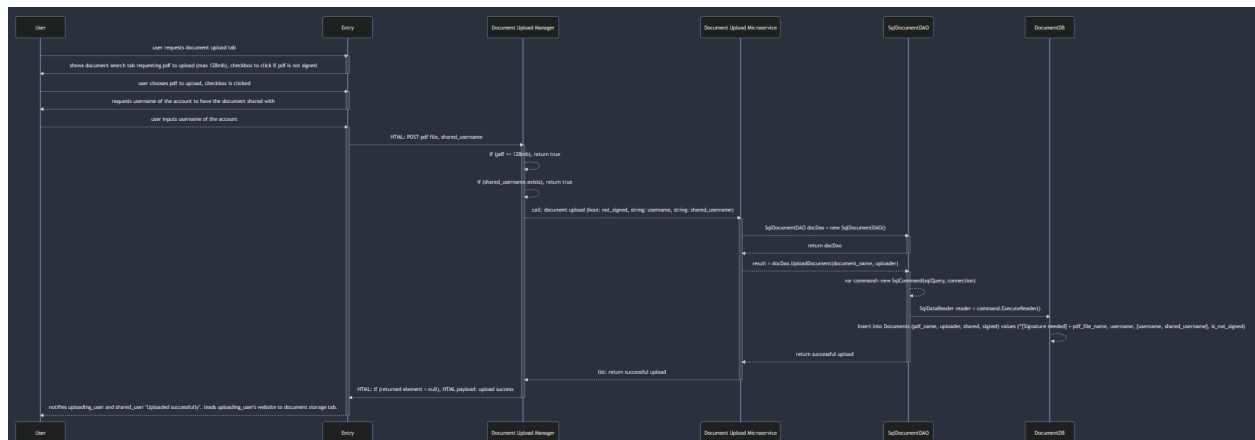
SqlDocumentDAO-->>Document Upload Microservice: return successful upload

Document Upload Microservice-->>Document Upload Manager: list: return successful upload

Document Upload Manager-->>Entry: HTML: if (returned element = null), HTML payload: upload success

Entry-->>User: notifies user pdf has been successfully uploaded. leads website to document storage tab.

success



sequenceDiagram

User-->>+Entry: user requests document upload tab

Entry-->>-User: shows document search tab requesting pdf to upload (max 128mb), checkbox to click if pdf is not signed

User-->>+Entry: user chooses pdf to upload, checkbox is clicked

Entry-->>-User: requests username of the account to have the document shared with

User-->>+Entry: user inputs username of the account

Entry-->>+Document Upload Manager: HTML: POST pdf file, shared\_username

Document Upload Manager-->>Document Upload Manager: if (pdf <= 128mb), return true

Document Upload Manager-->>Document Upload Manager: if (shared\_username.exists), return true

Document Upload Manager-->>+Document Upload Microservice: call: document upload (bool: not\_signed, string: username, string: shared\_username)

Document Upload Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Document Upload Microservice: return docDao

Document Upload Microservice-->>+SqlDocumentDAO: result = docDao.UploadDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Insert into Documents (pdf\_name, uploader, shared, signed) values ("[Signature needed] + pdf\_file\_name, username, [username, shared\_username], is\_not\_signed)

SqlDocumentDAO-->>-Document Upload Microservice: return successful upload

Document Upload Microservice-->>-Document Upload Manager: list: return successful upload

Document Upload Manager-->>-Entry: HTML: if (returned element = null), HTML payload: upload success

Entry-->>-User: notifies uploading\_user and shared\_user "Uploaded successfully". leads uploading\_user's website to document storage tab.

## Fail 1



## sequenceDiagram

User-->>+Entry: user requests document upload tab

Entry-->>-User: shows document search tab requesting pdf to upload (max 128mb), checkbox to click if pdf is not signed

User-->>+Entry: user chooses pdf to upload

Entry-->>+Document Upload Manager: HTML: POST pdf file

Document Upload Manager-->>Document Upload Manager: if (pdf <= 128mb), return true

Document Upload Manager-->>+Document Upload Microservice: call: document upload

(bool: signed, string: username)

Document Upload Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Document Upload Microservice: return docDao

Document Upload Microservice-->>+SqlDocumentDAO: result = docDao.UploadDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Insert into Documents (pdf\_name, uploader, shared, signed) values (pdf\_file\_name, username, username, signed)

SqlDocumentDAO-->>-Document Upload Microservice: return successful upload

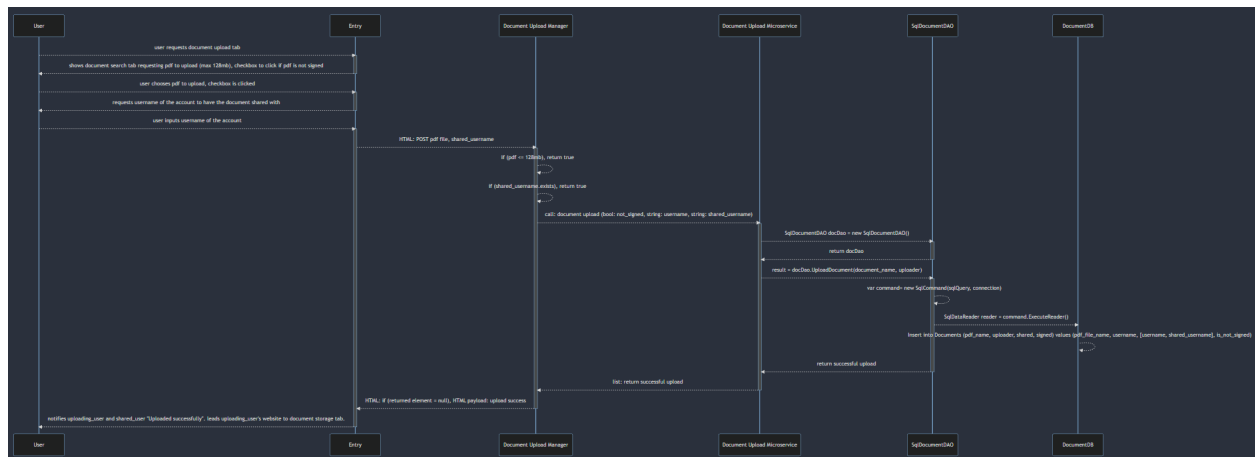
Document Upload Microservice-->>-Document Upload Manager: list: return successful upload

Document Upload Manager-->>-Entry: HTML: if (returned element = null), HTML payload: upload success

Entry-->>-User: leads website to document storage tab.



## Fail 2



### sequenceDiagram

User-->>Entry: user requests document upload tab

Entry-->>-User: shows document search tab requesting pdf to upload (max 128mb), checkbox to click if pdf is not signed

User-->>Entry: user chooses pdf to upload, checkbox is clicked

Entry-->>-User: requests username of the account to have the document shared with

User-->>Entry: user inputs username of the account

Entry-->>+Document Upload Manager: HTML: POST pdf file, shared\_username

Document Upload Manager-->>Document Upload Manager: if (pdf <= 128mb), return true

Document Upload Manager-->>Document Upload Manager: if (shared\_username.exists), return true

Document Upload Manager-->>+Document Upload Microservice: call: document upload (bool: not\_signed, string: username, string: shared\_username)

Document Upload Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Document Upload Microservice: return docDao

Document Upload Microservice-->>+SqlDocumentDAO: result = docDao.UploadDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Insert into Documents (pdf\_name, uploader, shared, signed) values (pdf\_file\_name, username, [username, shared\_username], is\_not\_signed)

SqlDocumentDAO-->>-Document Upload Microservice: return successful upload

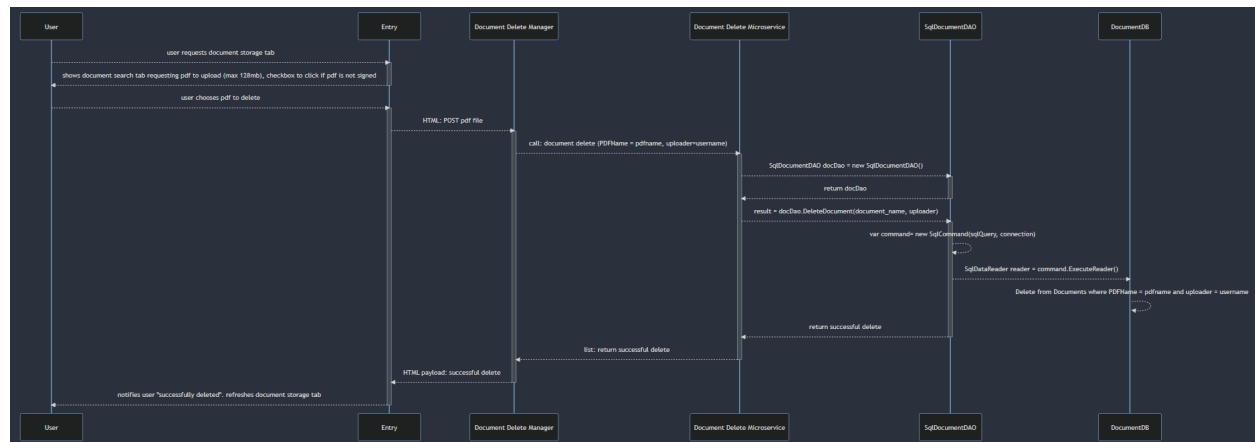
Document Upload Microservice-->>-Document Upload Manager: list: return successful upload

Document Upload Manager-->>-Entry: HTML: if (returned element = null), HTML payload: upload success

Entry-->>-User: notifies uploading\_user and shared\_user "Uploaded successfully". leads uploading\_user's website to document storage tab.

## Document Storage Delete

success



sequenceDiagram

User-->>+Entry: user requests document storage tab

Entry-->>-User: shows document search tab requesting pdf to upload (max 128mb), checkbox to click if pdf is not signed

User-->>+Entry: user chooses pdf to delete

Entry-->>+Document Delete Manager: HTML: POST pdf file

Document Delete Manager-->>+Document Delete Microservice: call: document delete (PDFName = pdfname, uploader=username)

Document Delete Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Document Delete Microservice: return docDao

Document Delete Microservice-->>+SqlDocumentDAO: result = docDao.DeleteDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Delete from Documents where PDFName = pdfname and uploader = username

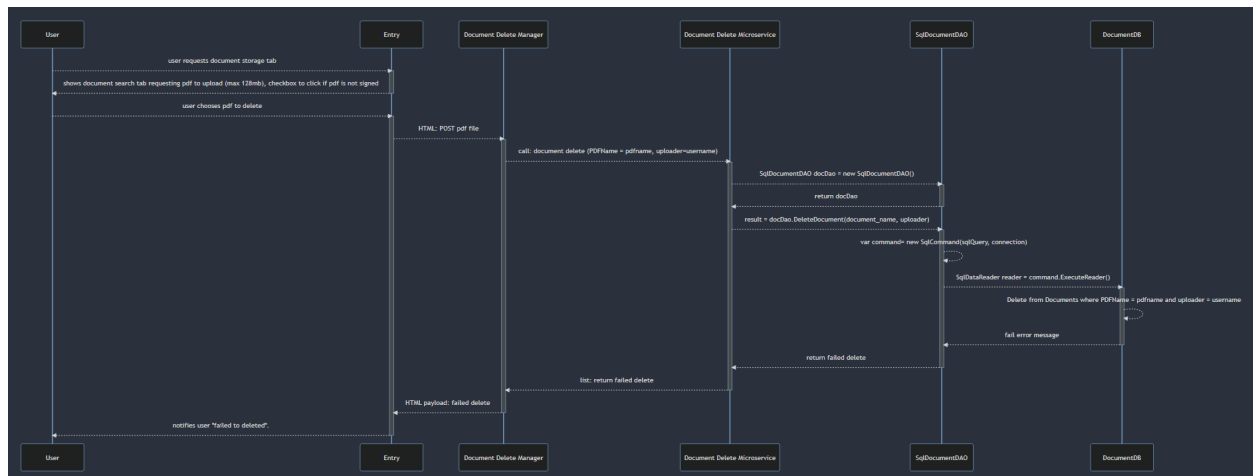
SqlDocumentDAO-->>-Document Delete Microservice: return successful delete

Document Delete Microservice-->>-Document Delete Manager: list: return successful delete

Document Delete Manager-->>-Entry: HTML payload: successful delete

Entry-->>-User: notifies user "successfully deleted". refreshes document storage tab

## Fail 1



### sequenceDiagram

User-->>+Entry: user requests document storage tab

Entry-->>-User: shows document search tab requesting pdf to upload (max 128mb), checkbox to click if pdf is not signed

User-->>+Entry: user chooses pdf to delete

Entry-->>+Document Delete Manager: HTML: POST pdf file

Document Delete Manager-->>+Document Delete Microservice: call: document delete (PDFName = pdfname, uploader=username)

Document Delete Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Document Delete Microservice: return docDao

Document Delete Microservice-->>+SqlDocumentDAO: result = docDao.DeleteDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Delete from Documents where PDFName = pdfname and uploader = username

DocumentDB-->>-SqlDocumentDAO: fail error message

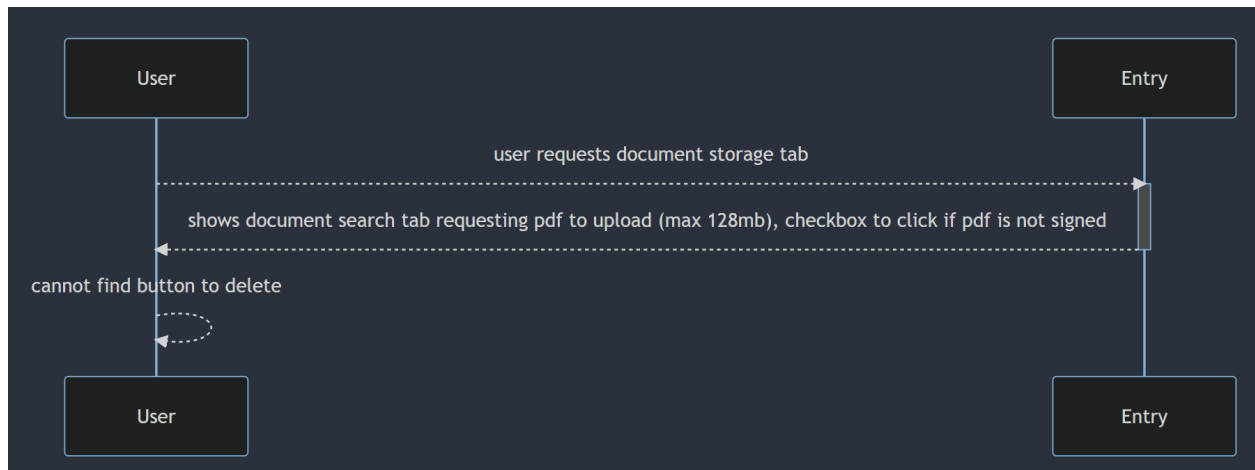
SqlDocumentDAO-->>-Document Delete Microservice: return failed delete

Document Delete Microservice-->>-Document Delete Manager: list: return failed delete

Document Delete Manager-->>-Entry: HTML payload: failed delete

Entry-->>-User: notifies user "failed to delete".

## Fail 2



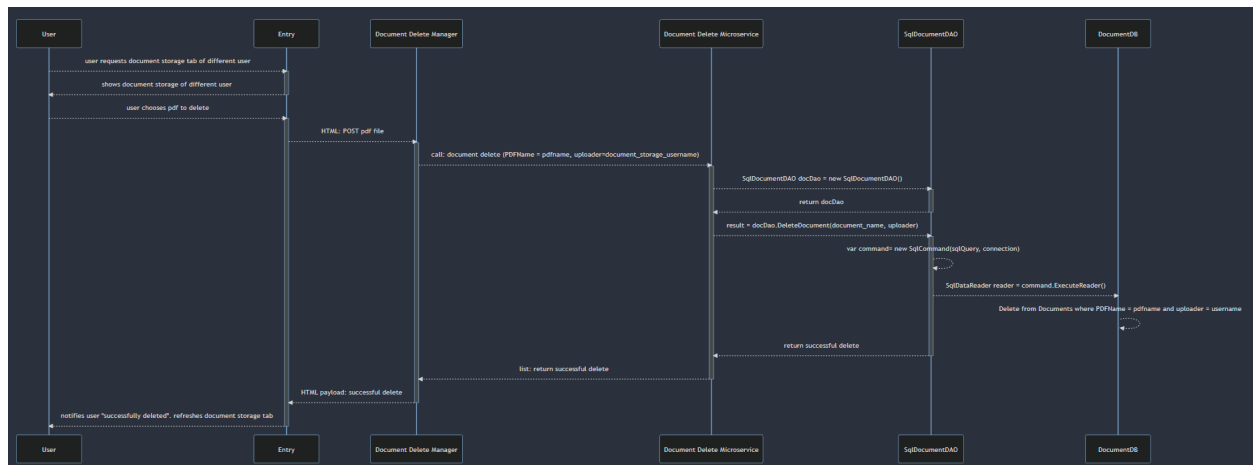
sequenceDiagram

User-->>+Entry: user requests document storage tab

Entry-->>-User: shows document search tab requesting pdf to upload (max 128mb),  
checkbox to click if pdf is not signed

User-->>User: cannot find button to delete specific pdf

## Fail 3



## sequenceDiagram

User-->>+Entry: user requests document storage tab of different user

Entry-->>-User: shows document storage of different user

User-->>+Entry: user chooses pdf to delete

Entry-->>+Document Delete Manager: HTML: POST pdf file

Document Delete Manager-->>+Document Delete Microservice: call: document delete (PDFName = pdfname, uploader=document\_storage\_username)

Document Delete Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new SqlDocumentDAO();

SqlDocumentDAO-->>-Document Delete Microservice: return docDao

Document Delete Microservice-->>+SqlDocumentDAO: result = docDao.DeleteDocument(document\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery, connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: Delete from Documents where PDFName = pdfname and uploader = username

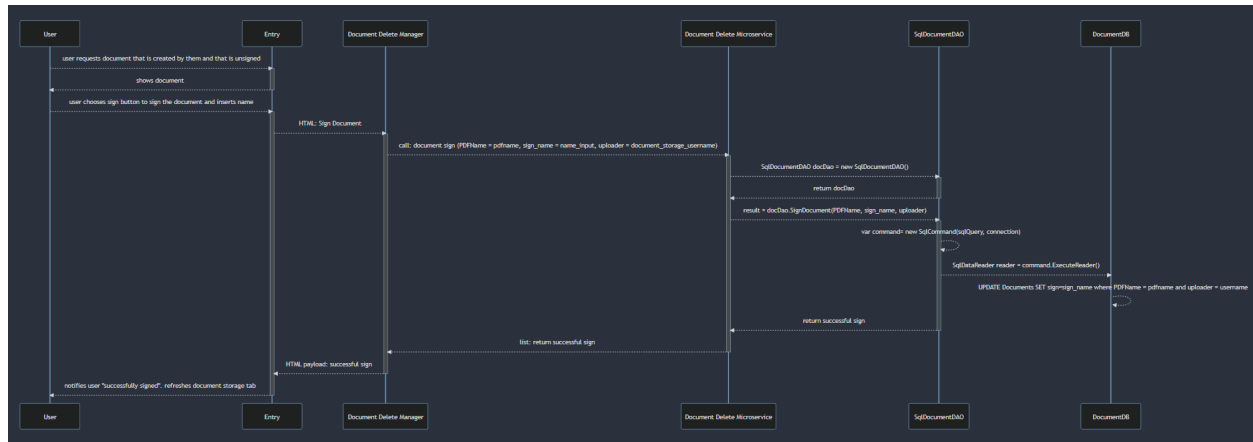
SqlDocumentDAO-->>-Document Delete Microservice: return successful delete

Document Delete Microservice-->>-Document Delete Manager: list: return successful delete

Document Delete Manager-->>-Entry: HTML payload: successful delete

Entry-->>-User: notifies user "successfully deleted". refreshes document storage tab

## Document Storage Sign



### sequenceDiagram

User-->>+Entry: user requests document that is created by them and that is unsigned

Entry-->>-User: shows document

User-->>+Entry: user chooses sign button to sign the document and inserts name

Entry-->>+Document Delete Manager: HTML: Sign Document

Document Delete Manager-->>+Document Delete Microservice: call: document sign

(PDFName = pdfname, sign\_name = name\_input, uploader = document\_storage\_username)

Document Delete Microservice-->>+SqlDocumentDAO: SqlDocumentDAO docDao = new  
SqlDocumentDAO();

SqlDocumentDAO-->>-Document Delete Microservice: return docDao

Document Delete Microservice-->>+SqlDocumentDAO: result =  
docDao.SignDocument(PDFName, sign\_name, uploader)

SqlDocumentDAO-->>SqlDocumentDAO: var command= new SqlCommand(sqlQuery,  
connection)

SqlDocumentDAO-->>+DocumentDB: SqlDataReader reader = command.ExecuteReader()

DocumentDB-->>DocumentDB: UPDATE Documents SET sign=sign\_name where PDFName  
= pdfname and uploader = username

SqlDocumentDAO-->>-Document Delete Microservice: return successful sign

Document Delete Microservice-->>-Document Delete Manager: list: return successful sign

Document Delete Manager-->>-Entry: HTML payload: successful sign

Entry-->>-User: notifies user "successfully signed". refreshes document storage tab