

## INTRO

### Solution

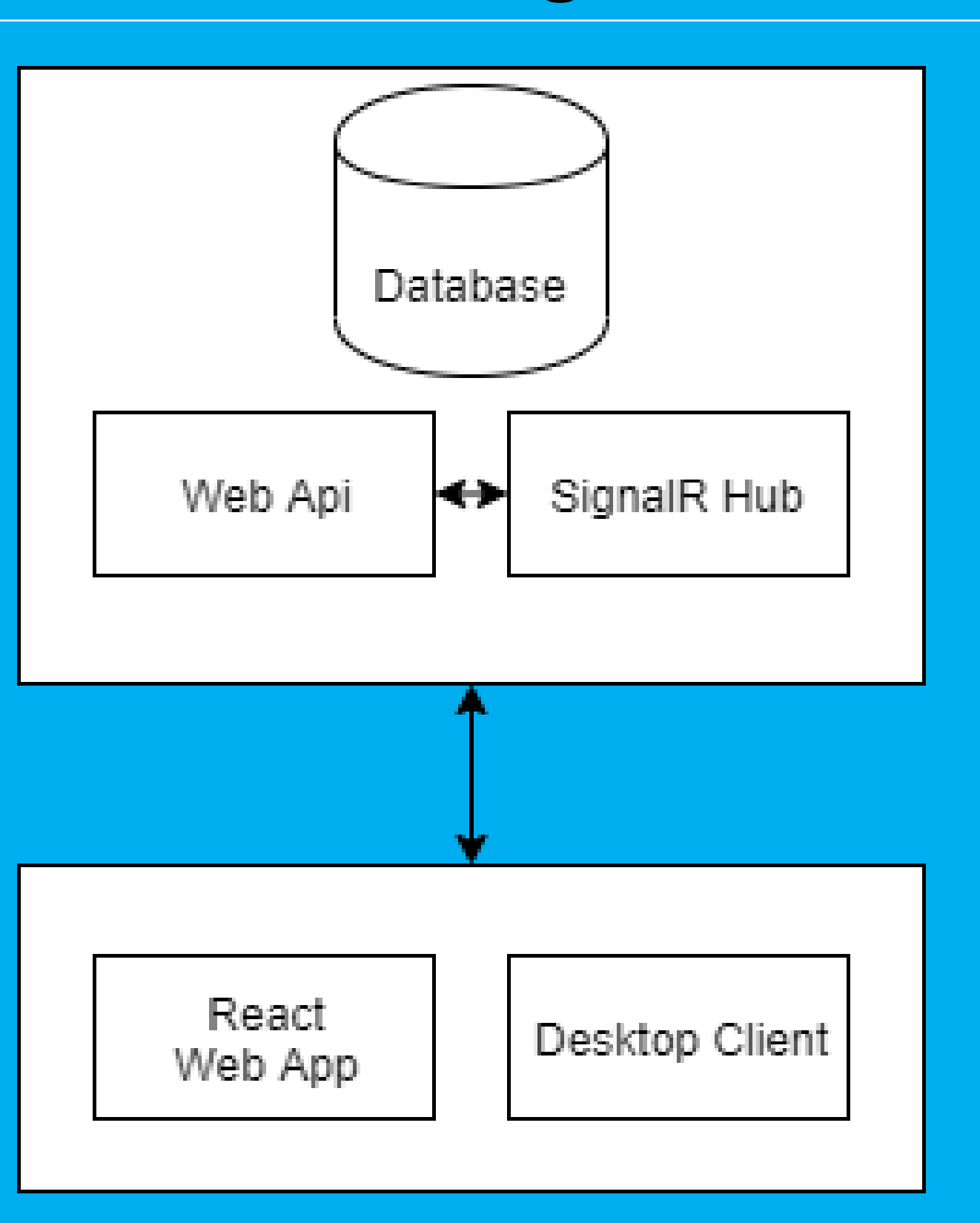
- New web application interface for users to sync files and check files' information
- New database design for allowing Buildertrend to edit

### Problem

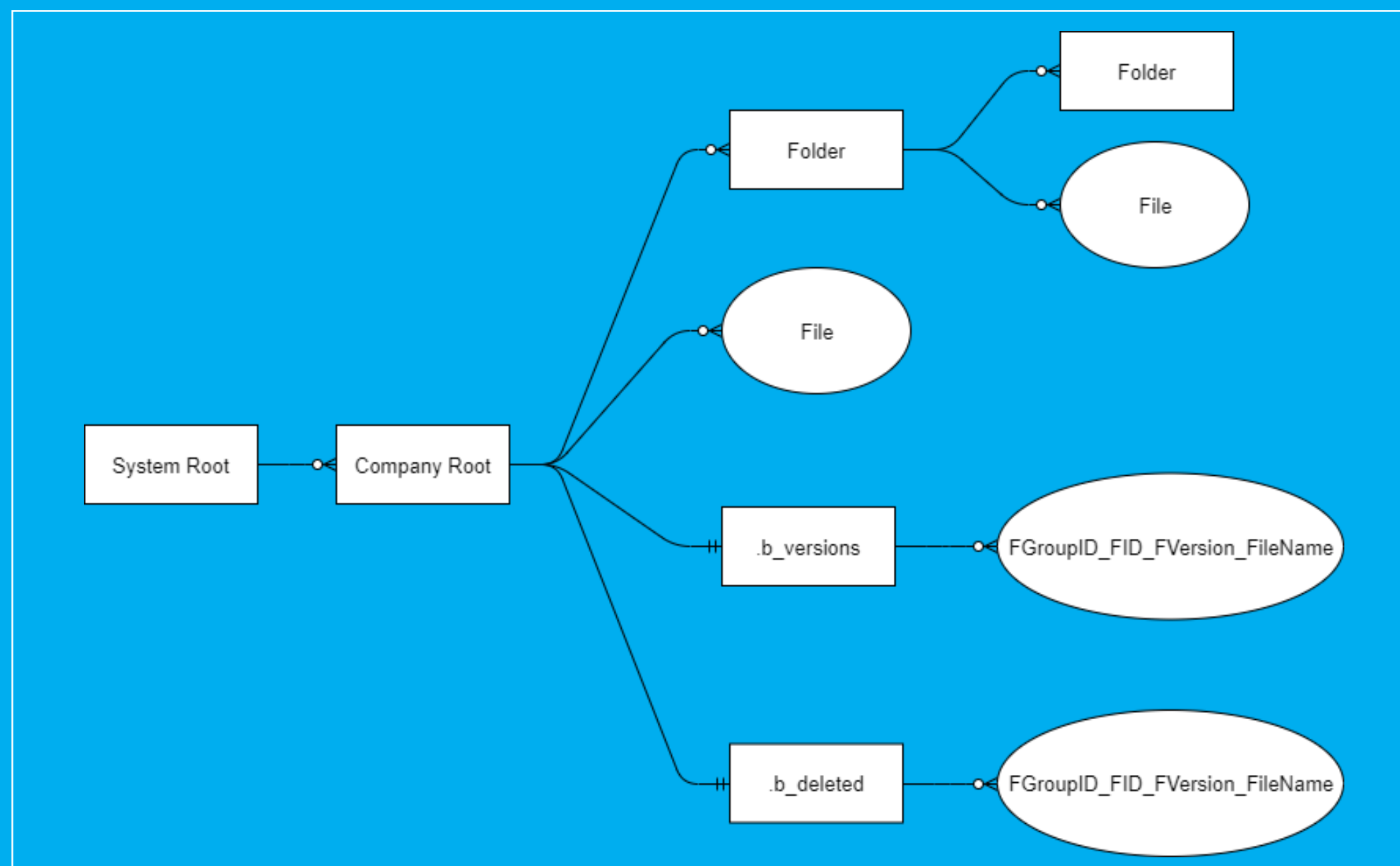
- Buildertrend currently has a windows application that users can install on their local machine
- This project is to expand the functionality of the current application
  - Includes a file browser and file sync capabilities where users can upload files to sync to the web-application

## DESIGN

### Block Diagram



### File System



### Requirements

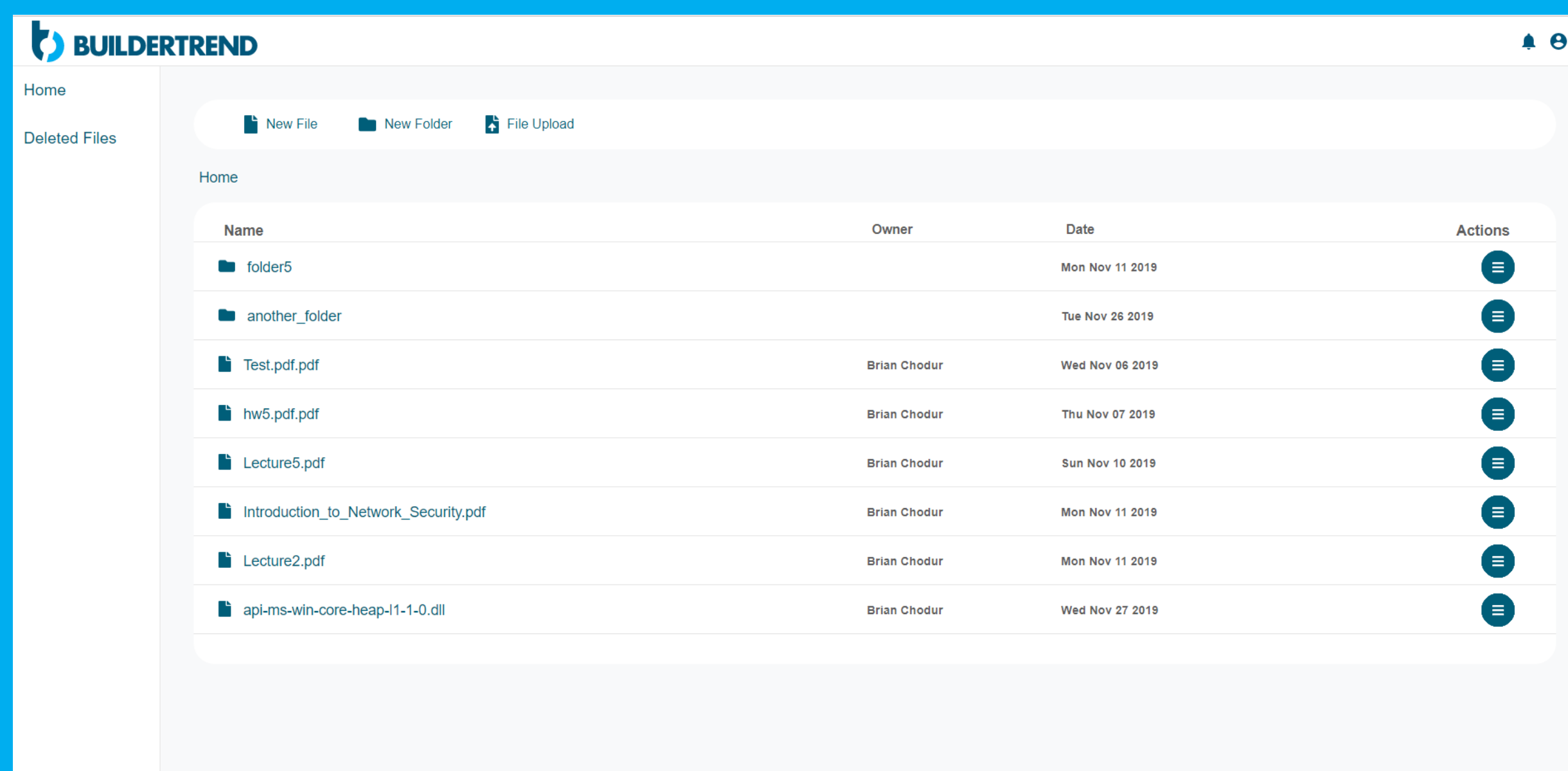
#### Functional:

- Upload files up to 50 MB in size
- View the contents of the files by downloading first
- Set permission roles for other users (view, edit)
- Browse all uploaded files and see the history of each file
- Download previous versions of a file

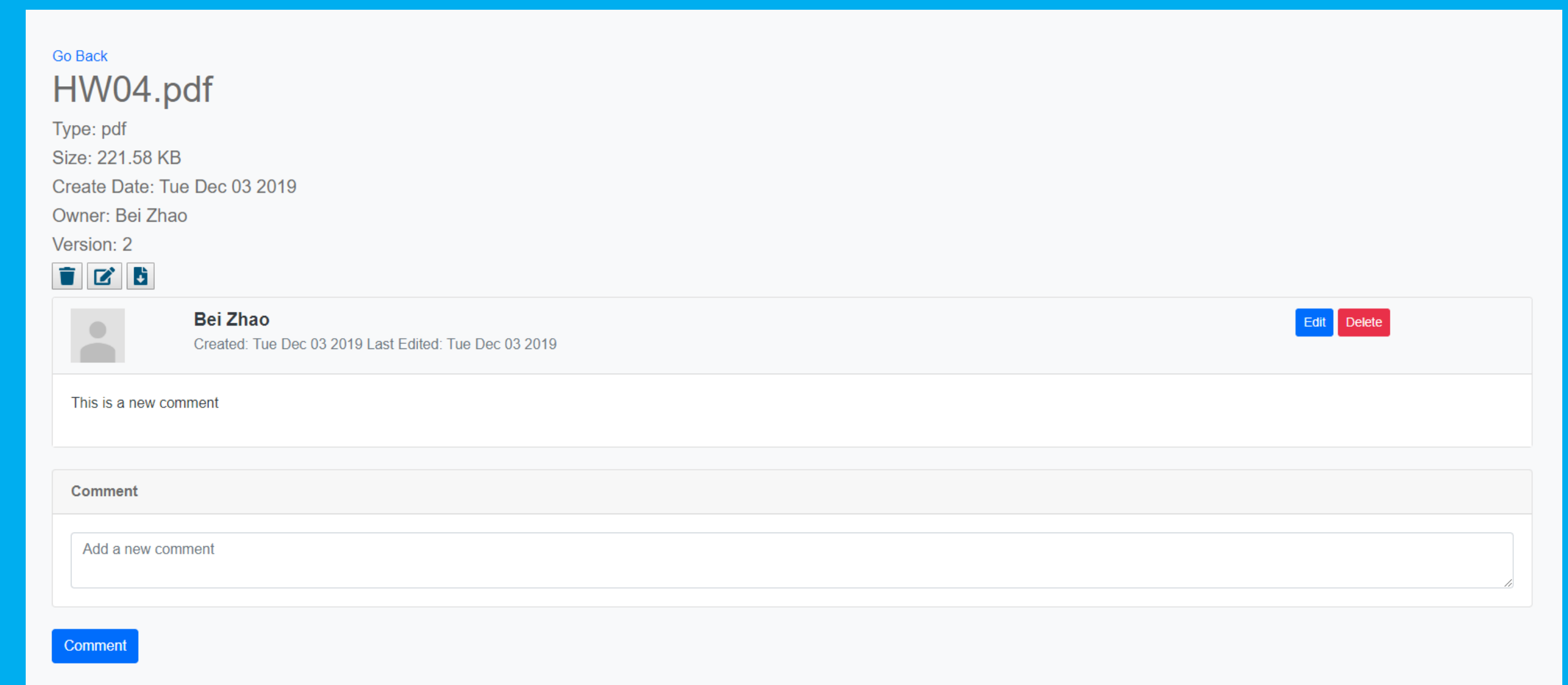
#### Non-functional:

- The web application UI shall be built in react.js
- The web API shall be built in C#
- The max file size shall be no greater than 50 MB

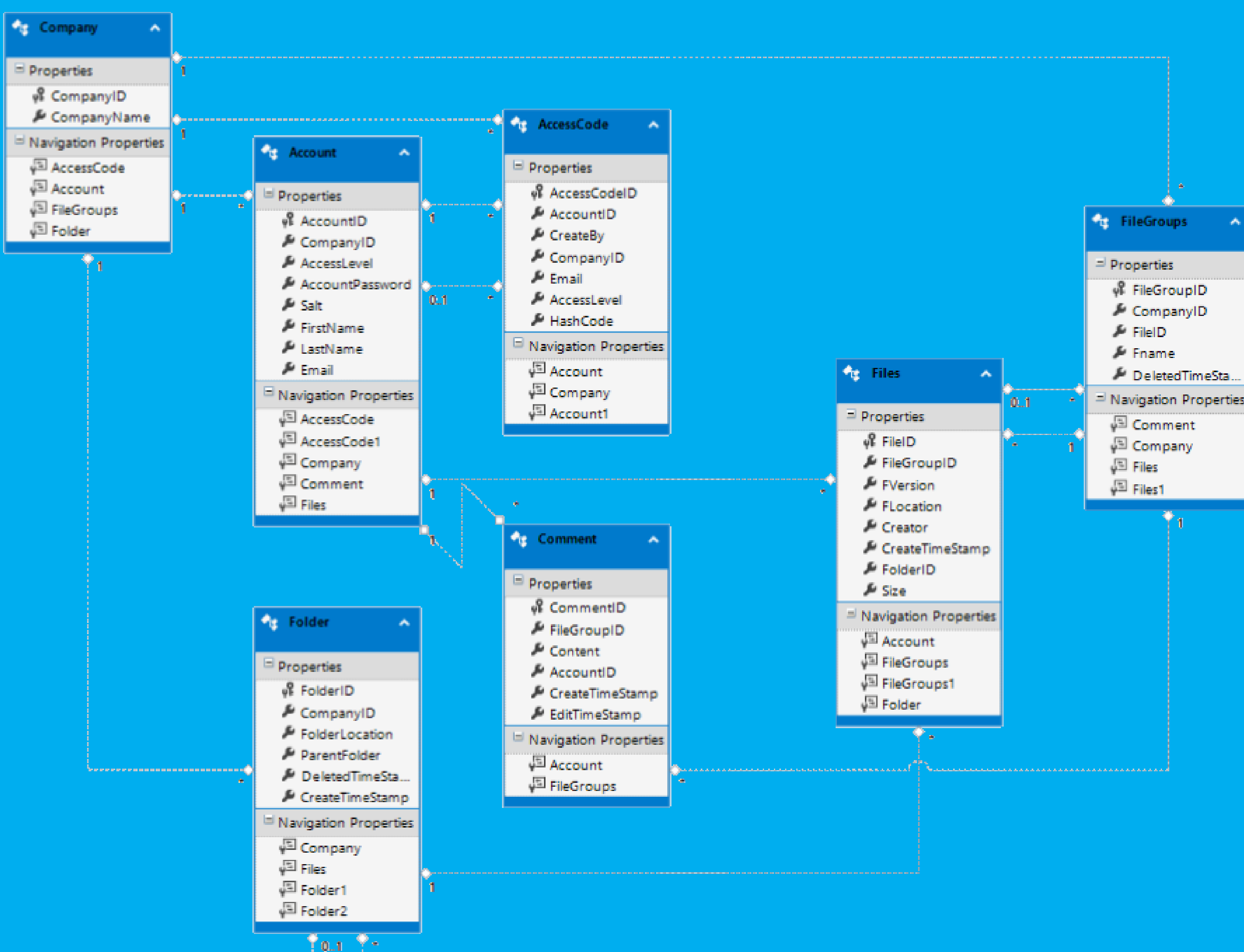
### Main Page



### Details Page



### Database Tables



### Intended Users and Uses

- Clients under Buildertrend who will want cloud file storage with sharing functionally across team or company
- Intended uses will be able to create an account, upload files to the website, view and download files

### Database Design Specifications

- 7 types of records: Company, Account, AccessCode, Folder, FileGroups, Files:
- Company keep track of basic company information such as CompanyName
  - Account which contains the login information, name, permission level and which company the account belongs to
  - AccessCode is needed to register an account, it contains information such as company, permission level of the new account, and the creator of the AccessCode
  - Folder contains information about which Company belongs to, parent folder, folder location, and delete timestamp indicate the folder deletion time
  - FileGroups are responsible to keep track of file versions. It contains which company it belongs to, information about the current version file and a deletion timestamp indicates the file deletion time
  - The File contains information about which FileGroups it belongs to, current location, file versions, create time stamp, the creator, and the size of the file

## TESTING



### Testing Strategy

- **Integration Testing:**
  - Use Postman to test backend API
  - Mock Data – Test react components to ensure they render and update correctly
- **System Testing:**
  - Test all systems working together (Web, API, Desktop)



## TECH

