My DropBox

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COP290: Design Practices

1 Objectives

We have to build an online file management system M̈yDropBox ∴ A server machine maintains the files of multiple users. The user should use a simple desktop application to login into the system. The content of user's account should remain synced with the server.

2 Overall Design

1. We will begin with creating different sub components like a File Transferring System, Credential Verifier, GUI part.
2. Once the components are ready, we will Link this to the network and get basic functionality working on the localhost.
3. Once the local interface is ready, we will take this to the web portal. We will use a server to store data and users will have to send queries to it
4. Once the web portal is ready we will link the offline and online parts.

3 Sub Components

1. **User Verification**

Listing 1: Class Parameters for User

```
class User
{
    private:
        std::string UserName;
        std::string PassWord;
};
```

Listing 2: Class Parameters for User

```
class UserBase
{
private:
    std::unordered_map<std::string, std::string> UsersList;
};
```

The User Base is a hastable in which the keys are usernames and the stored values are passwords. When the credentials of the user are to be verified, the key is looked up in the table. Inserting users is also achieved easily using this model.

2. **GUI interface**
TODO: FARAN

3. **Network Managing Part**

4. **Data Syncing Part**

Listing 3: Class Parameters for File History

```
class FileHistory
{
    private:
        std::string FolderLocation;
        std::vector< std::pair<std::string, int> > FileTimeBase;
};
```

4 Integration amongst Sub Components

5 Testing

1. Offline Testing

2. Online Testing

6 Extra Features