**Project Proposal**

**Group name: smart cloud**

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**GROUP MEMBERS**

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**TOPIC IDEA**

Our group is going to develop a cloud storage and files sharing application either using web or Android phone which performs the mainly functions like Baidu Cloud. First and most fundamentally, our application support users to upload their files onto the application and download them at any time later. Second, users can add friends in our application and tell their friends what files they want to get from their friends. Third, in terms of files sharing, friend-relationship users can transfer files using our application, while for users who are not in the relationship will using web to get access to the file by clicking certain web link and entering password for the certain file.

For additional requirements, we plan to improve these aspects. We will encrypt the data in our database and verification picture when users log in for instance to increase the security of our product. Additionally, files are able to be shared to WeChat using a link and a password. Besides, a server in the cloud will be used in our project to improve its performance, reliability and accessibility. And the support for both phone (Android) end and computer end usability.

**NETWORK REQUIREMENT**

Regarding network requirement, there will be several modes used in our project. First, a Browser/Server mode will be used to build the Web version as a part of our project. Major technologies used in this mode include PHP, HTTP and JS and so on. Second, a Client/Server mode will be applied to build the Mobile version, named android application. Major technologies used in this version include Socket, HTTP and JAVA and so on. Third, the communication and transfer of files with friends within the application apply P2P mode. One last point to emphasize is that we will employ a cloud server end so that this system is not restricted to work in a LAN. After we finish our project, the Smart Cloud will enable users between different PCs or mobile devices to manage their files (uploading, downloading and sharing, etc.) using the Internet. Also, the system will have to guarantee concurrent updating or refreshing on both PC end and Mobile end.

**STORAGE**

As mentioned in the previous part, we plan to rent a cloud server to store the user’s account and files. We will use a database to store user account, including the username, password, file path, file size and uploading time. Specially, we plan to adopt encryption algorithm to encrypt the user information before storing it into the database. So we can make sure that even administrators are not able know the user’s password, which further improves the security of our project. We will store user’s files on the server.

**INTERFACE**

As we all know that interface is crucial to the project. We want to design three interfaces, one for web, one for phone (android), and another one for the administrators. The web and phone interfaces will look cool and be creative. The administrators’ interface needs to be professional and power. What’s more, all these interfaces ought to be user friendly. To achieve those goals, we need to rely on some techniques, especially web frameworks like Bootstrap.