

### **Problem Statement 3**

### **Secure Online Repository System**

“How can this be secure?”- said Mohit looking at the URL which changed constantly with the change in album picture. He went to his friend’s room and had a discussion about it, the security of his album pictures. Some of his queries where:

- “If we just send the images URL to someone, can he open my pic?”
- “If not, How to implement this?”
- “How does Google does it with all of its documents?”
- “What should be written in the URL that only the privileged gets to see?”
- “How is this information stored?” .....etc.

He had a long discussion on this topic and the solution was a “Secure Online Repository System”.

You have to design an online system which will allow its users to share notes, documents, images, assignments etc. Sharing can be done with friends, groups of friends or it can be publicly shared or, in any other way. Basically we are trying to make an online library with different privilege levels.

The main part of this problem statement is to securely uploaded files. Security is the most important issue on the Internet.

“A Secure Web” is what we need today.....

#### **Modules:**

- User can login to the website and upload document(s) with some privilege level.
- Privilege level may be Public, Private or custom.
- Sharing should be secure so that no one else can see the files or download it.
- Sharing should enable people to edit those files on browser.
- It's not necessary to edit all types of files; use some basic ones like, text file. You can also move on to html files, word files, images, excel files, compressed etc. ( Bonus marks will be awarded as you include more of these file formats )
- Try to make a convertor, like when a user wants to download multiple files then there should be an option to download it in a zipped format.
- There should an option to upload multiple files in zipped format and decompress them after uploading.
- Hierarchical arrangement of files should be there for uploaded files.
- You can not only share a file but also a directory.
- You can add many more modules you can think of to make a good file management policy.

#### **Hints:**

- Closely take a look at the URL when you view someone’s album and think.
- Choose some encoding mechanism.
- You might have to design some new data structures to allow multiple users editing the same document simultaneously.

#### **Rules:**

- You are not allowed to use any CMS like Wordpress, Joomla, Drupal, etc.
- You are free to use open source libraries with proper GNU license
- Cross browser compatibility is a must.