

FILE SHARING SYSTEM

PROJECT REPORT
COMP 353 - DATABASES

Team 7

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1. PROJECT DESCRIPTION

The Comp 353 File Management System is a file sharing system in the vein of the Concordia CrsMgr. It is built using MySQL, and supports all queries and operations by a file sharing system for users who are developing a software system, or working on a group project. It uses a collection of MySQL tables, with a user interface coded in JavaScript, HTML, CSS and PHP. The application can easily be used to share files between users, as any member of a team can upload a file, or replace a previously uploaded file with a new version. Deleting files, recovering a deleted file within 24 hours and making sure that it is not possible to overwrite a newer file version with an older one are all features of the Comp 353 FSS. It keeps tracks of who downloaded which file, and keeps the information of all uploads in the database, such as upload date, file size, etc.

2. ASSUMPTIONS

The assumptions for this design are as follows:

A. Each group can hold up to six people.

As per the policies of our COMP 353 course this semester, we set the maximum number of people in a group to 6.

B. The FSS is only implemented for COMP 353 course.

As the CRSMGR system used in this class is specifically for COMP 353 - we also only implemented the FSS on a class-by-class basis. (ie - our project is only designed for this section of the COMP 353 course)

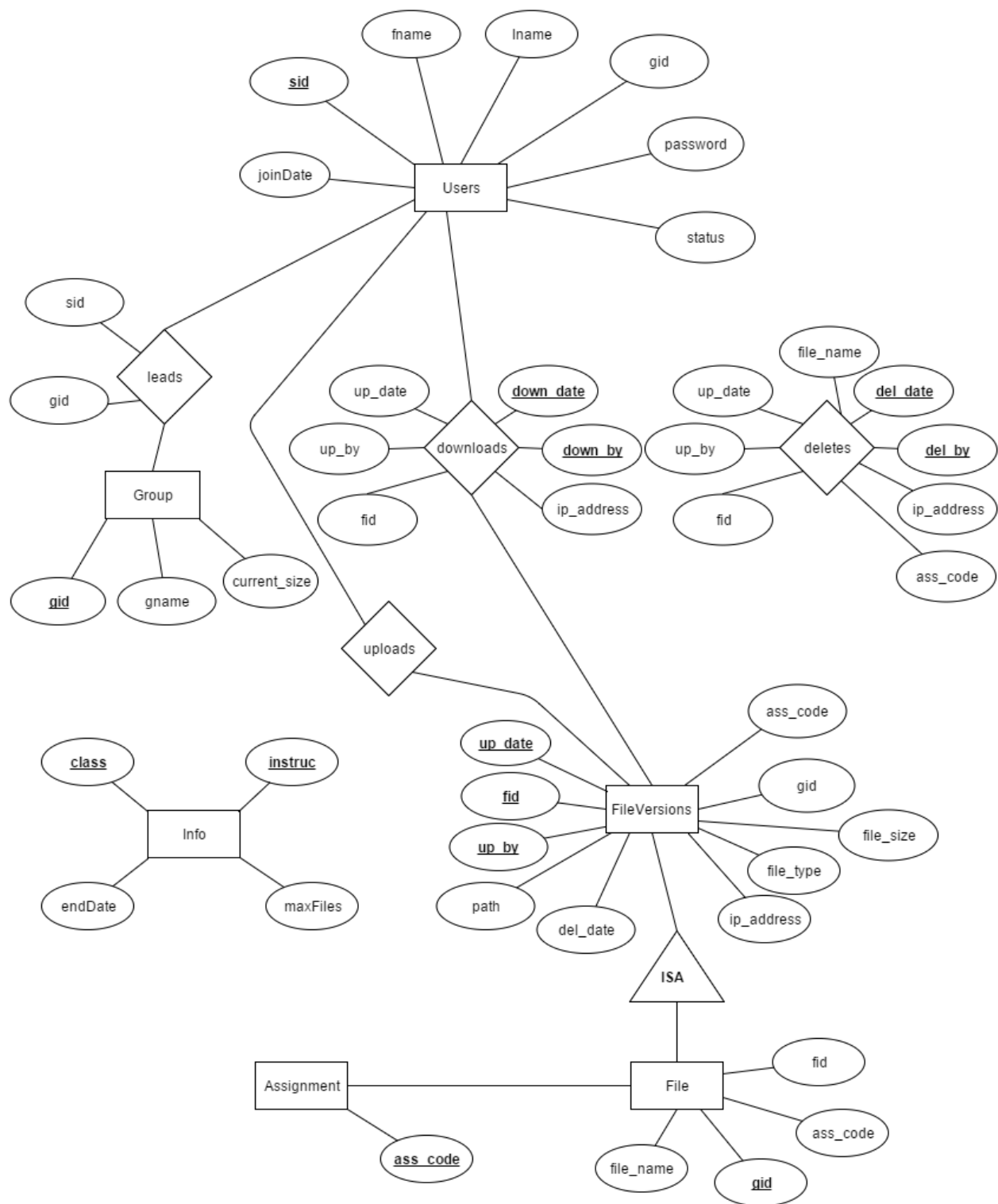
C. Users that are Professors or TAs are added manually by the course administrator through SQL.

As the number of TAs and Professors allocated to a given course is reasonably small - we assumed that these special positions would be manually entered by the course administrator.

D. Default password for new Students is set to 'pass123'

Just as we were given a default password when we were signed up for the CRSMGR site, Students within our FSS are also given a default password. Once logged in, Users can change their password (provided it meets requirements - which we assumed to be 6 or more numbers and letters).

3. E-R DIAGRAMS AND RELATIONAL DATABASE DESIGN



List of relations:

primary key | foreign key

Assignment (**ass_code:varchar**)
FileVersions (**fid:int** , **up_date:datetime** , **up_by:int** , **ass_code:varchar** , **gid:int** ,
file_size:float , file_type:varchar , path:varchar , ip_address:varchar , del_date:datetime)
Files (**fid:int** , **ass_code:varchar** , **gid:int** , file_name:varchar)
Groups (**gid:int** , gname:varchar , current_size:int)
Info (**instruc:int** , maxFiles:int , endDate:date , **class:varchar**)
Users (**sid:int** , fname:varchar , lname:varchar , **gid:int** , password:varchar , status:int ,
joinDate:datetime)
del (**del_date:datetime** , **del_by:int** , **up_date:datetime** , **fid:int** , **up_by:int** , ip_address:varchar
 , file_name:varchar , ass_code:varchar)
down (**down_date:datetime** , **down_by:int** , **up_date:datetime** , **fid:int** , **up_by:int** ,
ip_address:varchar)
leads (**sid:int** , **gid:int**)

Functional dependencies:

Assignment {}
FileVersions {fid, up_date, up_by → ass_code, gid, file_size, file_type, path, ip_address,
del_date}
Files {fid, ass_code, gid → file_name}
Groups {gid → gname, current_size}
Info {class → instruc, maxFiles, endDate}
Users {sid → fname, lname, gid, password, status, joinDate}
del {del_date, del_by, up_date, fid → up_by, ip_address, file_name, ass_code}
down {down_date, down_by, up_date, fid → up_by, ip_address}
leads {sid → gid | gid → sid}

4. ACCESSING WEBSITE

URL: https://qoc353_1.encs.concordia.ca/

ACCOUNT: qoc353_1

PASSWORD: dbsu2016

DUMMY STUDENT: 27046677 - pass123

DUMMY TA: 99999999 - pass123

DUMMY TEACHER: 88888888 - pass123

5. CONTENTS OF TABLES, QUERIES AND SCREENSHOTS

SHOW tables:

```
mysql> show tables;
+-----+
| Tables_in_qoc353_1 |
+-----+
| Assignment          |
| FileVersions        |
| Files               |
| Groups              |
| Info                |
| Users               |
| del                  |
| down                |
| leads                |
+-----+
9 rows in set (0.00 sec)
```

Table Assignment:

SHOW CREATE TABLE Assignment:

```
mysql> show create table Assignment;
+-----+-----+
| Table      | Create Table |
+-----+-----+
| Assignment | CREATE TABLE `Assignment` (
  `ass_code` varchar(25) NOT NULL,
  PRIMARY KEY (`ass_code`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
+-----+-----+
1 row in set (0.00 sec)
```

Table FileVersions:

SHOW CREATE TABLE FileVersions:

```
| FileVersions | CREATE TABLE `FileVersions` (  
  `fid` int(11) NOT NULL,  
  `up_date` datetime NOT NULL,  
  `up_by` int(8) NOT NULL,  
  `ass_code` varchar(25) NOT NULL,  
  `gid` int(11) NOT NULL,  
  `file_size` float NOT NULL,  
  `file_type` varchar(5) NOT NULL,  
  `path` varchar(200) NOT NULL,  
  `ip_address` varchar(15) NOT NULL DEFAULT '000.000.000.000',  
  `del_date` datetime DEFAULT NULL,  
  PRIMARY KEY (`fid`,`up_date`,`up_by`),  
  KEY `up_by` (`up_by`),  
  KEY `ass_code` (`ass_code`),  
  KEY `gid` (`gid`),  
  KEY `fid` (`fid`),  
  KEY `up_date` (`up_date`),  
  CONSTRAINT `FileVersions_ibfk_1` FOREIGN KEY (`up_by`) REFERENCES `Users` (`sid`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `FileVersions_ibfk_2` FOREIGN KEY (`ass_code`) REFERENCES `Assignment` (`ass_code`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `FileVersions_ibfk_3` FOREIGN KEY (`gid`) REFERENCES `Groups` (`gid`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `FileVersions_ibfk_4` FOREIGN KEY (`fid`) REFERENCES `Files` (`fid`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

Table Files:

SHOW CREATE TABLE Files:

```
| Files | CREATE TABLE `Files` (  
  `fid` int(11) NOT NULL AUTO_INCREMENT,  
  `ass_code` varchar(25) NOT NULL,  
  `gid` int(11) NOT NULL,  
  `file_name` varchar(100) NOT NULL,  
  PRIMARY KEY (`fid`,`ass_code`,`gid`),  
  KEY `gid` (`gid`),  
  KEY `ass_code` (`ass_code`),  
  CONSTRAINT `Files_ibfk_1` FOREIGN KEY (`gid`) REFERENCES `Groups` (`gid`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `Files_ibfk_2` FOREIGN KEY (`ass_code`) REFERENCES `Assignment` (`ass_code`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB AUTO_INCREMENT=412 DEFAULT CHARSET=latin1 |
```

Table Groups:

SHOW CREATE TABLE Groups:

```
| Groups | CREATE TABLE `Groups` (  
  `gid` int(11) NOT NULL,  
  `gname` varchar(10) NOT NULL,  
  `current_size` int(11) NOT NULL DEFAULT '0',  
  PRIMARY KEY (`gid`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

Table Info:

SHOW CREATE TABLE Info:

```
| Info | CREATE TABLE `Info` (  
  `instruc` int(11) NOT NULL,  
  `maxFiles` int(11) NOT NULL,  
  `endDate` date NOT NULL,  
  `class` varchar(7) NOT NULL,  
  PRIMARY KEY (`class`),  
  KEY `instruc` (`instruc`),  
  CONSTRAINT `Info_ibfk_1` FOREIGN KEY (`instruc`) REFERENCES `Users` (`sid`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

Table Users:

SHOW CREATE TABLE Users:

```
| Users | CREATE TABLE `Users` (  
  `sid` int(8) NOT NULL,  
  `fname` varchar(25) NOT NULL,  
  `lname` varchar(25) NOT NULL,  
  `gid` int(11) DEFAULT '0',  
  `password` varchar(20) NOT NULL,  
  `status` int(1) NOT NULL DEFAULT '2',  
  `joinDate` datetime NOT NULL DEFAULT CURRENT_TIMESTAMP,  
  PRIMARY KEY (`sid`),  
  KEY `gid` (`gid`),  
  CONSTRAINT `Users_ibfk_1` FOREIGN KEY (`gid`) REFERENCES `Groups` (`gid`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

Table del:

SHOW CREATE TABLE del:

```
| del | CREATE TABLE `del` (  
  `del_date` datetime NOT NULL DEFAULT CURRENT_TIMESTAMP,  
  `del_by` int(8) NOT NULL DEFAULT '0',  
  `up_date` datetime NOT NULL,  
  `fid` int(11) NOT NULL,  
  `up_by` int(8) NOT NULL,  
  `ip_address` varchar(15) NOT NULL DEFAULT '000.000.000.000',  
  `file_name` varchar(100) NOT NULL,  
  `ass_code` varchar(25) NOT NULL,  
  PRIMARY KEY (`del_by`, `del_date`, `up_date`, `fid`),  
  KEY `up_date` (`up_date`),  
  KEY `fid` (`fid`),  
  KEY `up_by` (`up_by`)  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

Table down:

SHOW CREATE TABLE down:

```
| down | CREATE TABLE `down` (  
  `down_date` datetime NOT NULL DEFAULT CURRENT_TIMESTAMP,  
  `down_by` int(8) NOT NULL DEFAULT '0',  
  `up_date` datetime NOT NULL,  
  `fid` int(11) NOT NULL,  
  `up_by` int(11) NOT NULL,  
  `ip_address` varchar(15) NOT NULL DEFAULT '000.000.000.000',  
  PRIMARY KEY (`down_by`, `down_date`, `up_date`, `fid`),  
  KEY `up_date` (`up_date`),  
  KEY `fid` (`fid`),  
  KEY `up_by` (`up_by`),  
  CONSTRAINT `down_ibfk_1` FOREIGN KEY (`down_by`) REFERENCES `Users` (`sid`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `down_ibfk_2` FOREIGN KEY (`up_date`) REFERENCES `FileVersions` (`up_date`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `down_ibfk_3` FOREIGN KEY (`fid`) REFERENCES `FileVersions` (`fid`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `down_ibfk_4` FOREIGN KEY (`up_by`) REFERENCES `FileVersions` (`up_by`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```

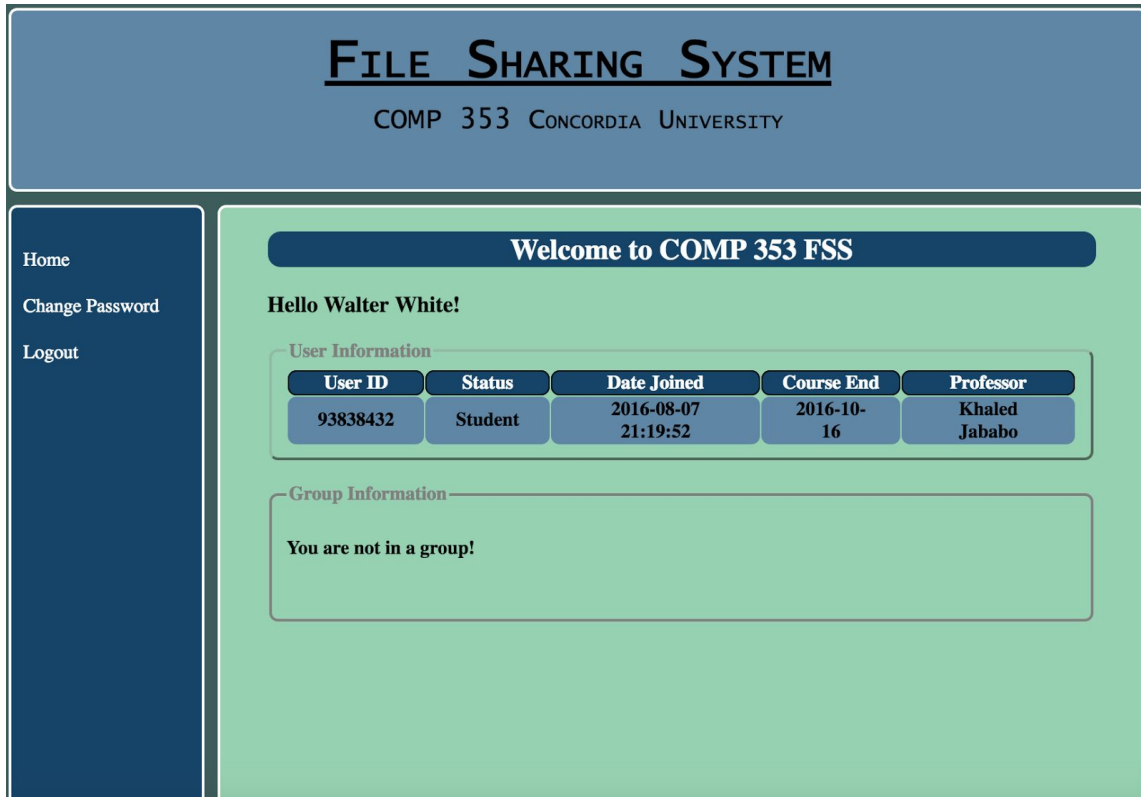
Table leads:

SHOW CREATE TABLE leads:

```
| leads | CREATE TABLE `leads` (  
  `sid` int(11) NOT NULL,  
  `gid` int(11) NOT NULL,  
  PRIMARY KEY (`sid`, `gid`),  
  KEY `leads_ibfk_2` (`gid`),  
  CONSTRAINT `leads_ibfk_2` FOREIGN KEY (`gid`) REFERENCES `Groups` (`gid`) ON DELETE CASCADE ON UPDATE CASCADE,  
  CONSTRAINT `leads_ibfk_1` FOREIGN KEY (`sid`) REFERENCES `Users` (`sid`) ON DELETE CASCADE ON UPDATE CASCADE  
) ENGINE=InnoDB DEFAULT CHARSET=latin1 |
```


INTERFACE PICTURES

USER NOT IN ANY GROUP:



This is the most basic user interface in our system. The user is not part of any group and so the only pages available to them are the home page resuming their status, the password change page and the logout option.

STUDENT:

FILE SHARING SYSTEM

COMP 353 CONCORDIA UNIVERSITY

Home

Upload Files

Manage Files

Change Password

Logout

Welcome to COMP 353 FSS

Hello Jonathan Linton!

User Information

User ID	Status	Date Joined	Course End	Professor
27388489	Student	2016-08-07 21:11:59	2016-10-16	Khaled Jababo

Group Information

Group ID	Files Available	Size of Group Files (KB)	Group Leader
1	4	913/100000	Simon Jacques

Group Members:

Student ID	Name
13484738	George Smith
22839488	Sarah Boyer
27046677	Simon Jacques
27388489	Jonathan Linton
33242535	Luke Skywalker
47294656	Anaëlle Leblanc

This is the student interface. Because they are part of a group, students can upload and manage files. Managing files includes downloading and deleting them for any team member, in addition to being able to rollback to previous versions for the team leader.

PROFESSOR:

FILE SHARING SYSTEM

COMP 353 CONCORDIA UNIVERSITY

Home

Modify Students

Modify Groups

Modify Assignments

Manage Files

File Statistics

Change Password

Logout

Welcome to COMP 353 FSS

Hello Khaled Jababo!

User Information

User ID	Status	Date Joined	Course End	Professor
88888888	Professor	2016-07-30 14:42:44	2016-10- 16	Khaled Jababo

All Users:

User ID	Name
13484738	George Smith
17568295	Sebastian Roughne
21243115	Anakin Skywalker
22234343	Tyrone Proctor
22343335	Bob McFee
22348844	Lance Lannister
22839488	Sarah Boyer
22849999	Liam Horne
22938484	Jimmy Neutron
22938493	Homer Simpson
22939453	Usain Bolt

Home
Modify Students
Modify Groups
Modify Assignments
Manage Files
File Statistics
Change Password
Logout

Group Information

Available Files:

Group ID	File Name	Assignment
1	353_a1.pdf	a1
1	353_a2.pdf	a1
1	DSCM.exe	final
1	putty.exe	warmup

Groups:

Group ID	Group Name	Total File Size (KB)
1	qoc_353_1	913/100000
2	qoc_353_2	0/100000
3	qoc_353_3	0/100000
4	qoc_353_4	0/100000
5	qoc_353_5	0/100000
6	qoc_353_6	0/100000
7	grp_7	0/100000
8	grp_8	0/100000
9	grp_9	0/100000
10	qo_353_10	0/100000

This is the professor page. Teachers can add students to the class, create groups, add students to groups, and remove them from said groups. They can also add, rename and remove assignment categories. Teachers can download all files uploaded by the students and have access to file statistics per student. They can of course also change their password and logout.

FEATURES:

Home
Upload Files
Manage Files
Change Password
Logout

Upload a File

Location:

a1

Select your file:

Choose File No file chosen

Upload File
Reset

This is the file upload page. The user picks a category and a file to upload, and uploads the file.

Home
Upload Files
Manage Files
Change Password
Logout

Manage Files

Files available for group 1:

ID	Name	For	Group	Version
408	353_a1.pdf	a1	qoc_353_1	List
409	353_a2.pdf	a1	qoc_353_1	List
410	DSCM.exe	final	qoc_353_1	List
411	putty.exe	warmup	qoc_353_1	List

Home
Upload Files
Manage Files
Change Password
Logout

Manage Files

Files available for group 1:

ID	Name	For	Group	Version	Rollback
408	353_a1.pdf	a1	qoc_353_1	List	Options
409	353_a2.pdf	a1	qoc_353_1	List	Options
410	DSCM.exe	final	qoc_353_1	List	Options
411	putty.exe	warmup	qoc_353_1	List	Options

This is the manage file page. A student can see here all the files uploaded by their team and download them. If they are the team leader, they can rollback to a previous version of the file.

Home
Upload Files
Manage Files
Change Password
Logout

Change Your Password

Current Password:

New Password:

Re-Type New Password:

Change Password

This is the password change page. Users can change their password here. Checks are made so that the new password is different, and contains letters and numbers.

Home
Modify Students
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Add/Remove Students

Add a Student:

Student ID:

First Name:

Last Name:

* Password will be set to "pass123" by default!

* Student will not be placed in any group by default!

Add

Remove A Student:

Select a student

Remove

Currently Enrolled Students:

Student ID	Name
13484738	George Smith
17568295	Sebastian Roughne
21243115	Anakin Skywalker
22234343	Tyrone Proctor
22343335	Bob McFee
22348844	Lance Lannister
22839488	Sarah Boyer
22849999	Liam Horne
22938484	Jimmy Neutron
22938493	Homer Simpson
22939453	Usain Bolt
23455667	Andres Lou
23456789	Bob McBobber
24983728	Donald Trump
27046677	Simon Jacques
27184615	Karik Manazzi
27384738	Random Person
27388489	Jonathan Linton

This is the add/remove student page. The teacher can use it to add and remove students from his class. The student ID is checked so that it is exactly 8 digits.

Home
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Modify Groups
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Manage Files
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Change Password
Logout

Modify Groups

Assign student to a group:

Select a student

Select a group

Add

Remove student from a group:

Select a student

Remove

Rename a group:

Select a group

Type new name

Rename

Currently Enrolled Students:

Group ID	Student ID	Name
1	13484738	George Smith
1	27388489	Jonathan Linton
1	22839488	Sarah Boyer
1	33242535	Luke Skywalker
1	47294656	Anaelle Leblanc
1	27046677	Simon Jacques
2	38293883	Khoi Nham
2	51917581	Franz Jord
2	22849999	Liam Horne
2	28394839	David Morris
2	17568295	Sebastian Roughne
3	28494839	Alan Turing
3	27184615	Karik Manazzi
3	21243115	Anakin Skywalker
3	38294838	Ronald Weasley
3	22938484	Jimmy Neutron
4	28948393	Josiah Go
4	38298473	Kanye West

Home
Modify Students
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Change Password
Logout

Rename a group:

Select a group

Type new name

Rename

Define group leader:

Select a student

Make Leader

3	28494839	Alan Turing
3	27184615	Karik Manazzi
3	21243115	Anakin Skywalker
3	38294838	Ronald Weasley
3	22938484	Jimmy Neutron
4	28948393	Josiah Go
4	38298473	Kanye West
4	22938493	Homer Simpson
4	29138243	Beyonce Knowles
4	29581755	Bianca Larose
4	22234343	Tyrone Proctor
5	29388849	Frodo Baggins
5	29283948	Zachary Apple
5	22343335	Bob McFee
5	39284938	Justin Trudeau
5	22939453	Usain Bolt
6	39384932	Obiwan Kenobi
6	47246592	Jacob Sirouac
6	24983728	Donald Trump
6	29933441	Michael Phelps
6	29384948	Hillary Clinton
6	22348844	Lance Lannister
7	88373723	Harry Potter
8	65826486	Lorenzo Cardamone

This is the modify groups page. The teacher can use it to assign and remove students from groups (respecting the group size limit). The professor can also rename groups.

Home
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Modify Groups
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Modify Assignments

Add an assignment:

Type new assignment name

Add

Remove an assignment:

Select an assignment

Remove

Rename an assignment:

Select an assignment

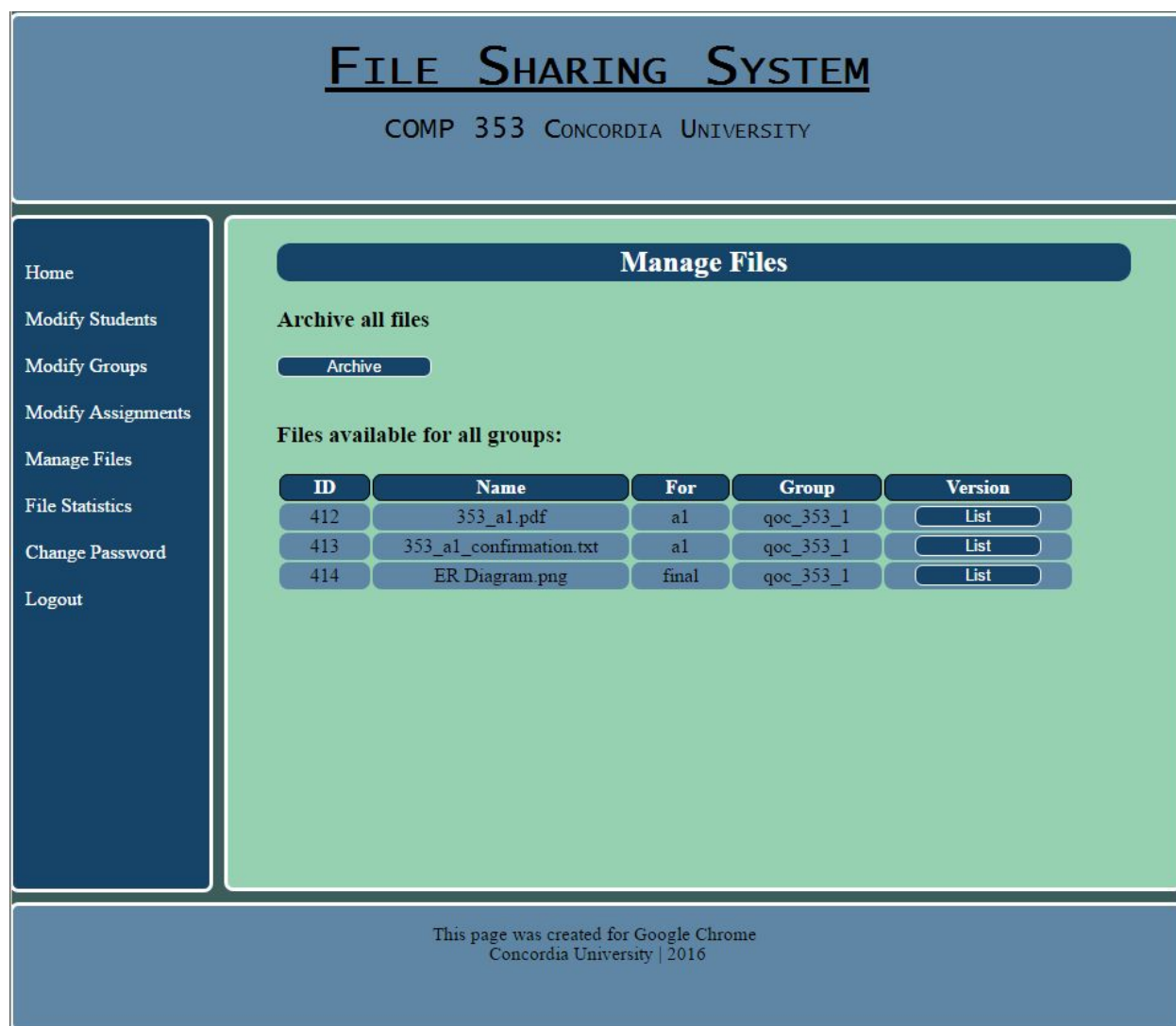
Type new name

Rename

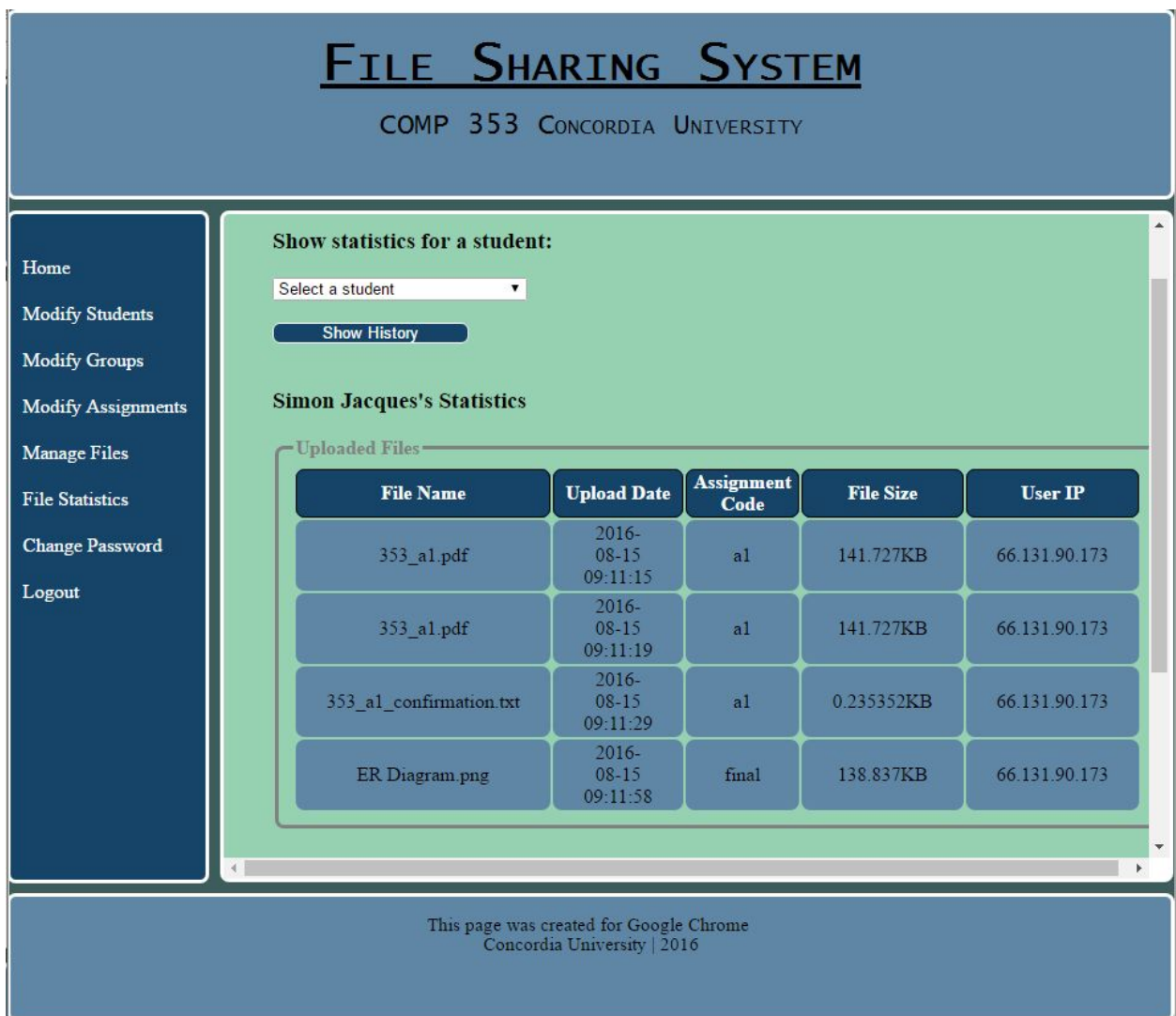
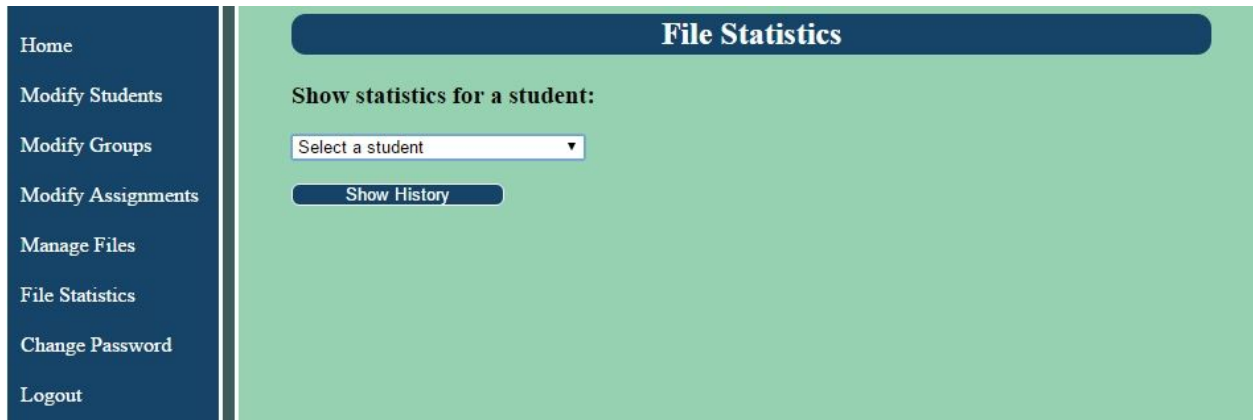
Current assignments:

Name	Files
a1	2
a2	0
a3	0
final	1
q1	0
q2	0
q3	0
warmup	1

This is the modify assignments page. The professor can add, remove, and rename assignment categories.



This is the Professor's manage files page. They are permitted to download any file, view different versions as well as archive the course.



This is the file statistics page. The teacher selects a student, and a whole history of uploads, downloads and deletions is displayed for that student.

6. ADDITIONAL FEATURES

REMOVE ENTRIES FROM DELETE TABLE

FILE SHARING SYSTEM

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- Modify Assignments
- Manage Files
- File Statistics
- Change Password
- Logout

Show statistics for a student:

27046677 - Simon Jacques ▼

Show History

No uploads!

No downloads!

Deleted Files

File Name	Assignment	Delete Date	Upload Date	File Size	User IP
test_file.txt	a1	2016-08-13 11:52:57	2016-08-12 05:46:55	27046677KB	66.131.90.173
353_a1.pdf	a1	2016-08-13 11:53:08	2016-08-12 05:45:02	27046677KB	66.131.90.173

Number of Files Uploaded: 0
Number of Files Downloaded: 0
Number of Files Deleted: 2

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- Home
- Modify Students
- Modify Groups

Manage Files

Archive all files

Archive

FILE SHARING SYSTEM

COMP 353 CONCORDIA UNIVERSITY

Home

Modify Students

Modify Groups

Modify Assignments

Manage Files

File Statistics

Change Password

Logout

File Statistics

Show statistics for a student:

Select a student ▼

Show History

No uploads!

No downloads!

No deleted files!

Number of Files Uploaded: 0
Number of Files Downloaded: 0
Number of Files Deleted: 0

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```
$query = " DELETE FROM del;";  
mysql_query($query);
```

DISPLAY SIZE OF DIFFERENT VERSIONS OF A FILE

FILE SHARING SYSTEM

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- Home
- Upload Files
- Manage Files
- Change Password
- Logout

Manage Files

Versions Available for File 392 [test_file.txt]

Upload Date	By	Size	Download	Modify
2016-08-12 05:47:24	Simon Jacques	2.33398KB	Link 1	Delete 1
2016-08-12 05:46:55	Simon Jacques	50.5273KB	Link 2	Delete 2

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```
print('          </td>
          <td>'); // Print file size
          $size = mysql_result($result, $i, 'file_size');
          print($size . "KB");
print('          </td>
```

TRIGGERS TO TEST FOR GROUP SIZE

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Modify Groups

Assign student to a group:

93838432 - Walter V ▾
1 ▾
Add

Remove student from a group:

Select a student ▾
Remove

Rename a group:

Select a group ▾
Type new name
Rename

Currently Enrolled Students:

Group ID	Student ID	Name
1	13484738	George Smith
1	27388489	Jonathan Linton
1	22839488	Sarah Boyer
1	33242535	Luke Skywalker
1	47294656	Anaelle Leblanc
1	27046677	Simon Jacques
2	38293883	Khoi Nham
2	51917581	Franz Jord
2	22849999	Liam Horne
2	28394839	David Morris
2	17568295	Sebastian Roughne
3	28494839	Alan Turing
3	27184615	Karik Manazzi
3	21243115	Anakin Skywalker
3	38294838	Ronald Weasley
3	22938484	Jimmy Neutron
4	28948393	Josiah Go

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Modify Groups

Assign student to a group:

93838432 - Walter V ▾
1 ▾
Add

Remove student from a group:

Select a student ▾
Remove

Currently Enrolled Students:

Group ID	Student ID	Name
1	13484738	George Smith
1	27388489	Jonathan Linton
1	22839488	Sarah Boyer
1	33242535	Luke Skywalker
1	47294656	Anaelle Leblanc
1	27046677	Simon Jacques
2	38293883	Khoi Nham
2	51917581	Franz Jord
2	22849999	Liam Horne
2	28394839	David Morris

qoc353_1.encs.concordia.ca says:
An error occured. Make sure there are no duplicates, or if the chosen group is full.
OK

```

| CapacityTrigger | UPDATE | Users | BEGIN
SET @cap = NULL;
SELECT COUNT(*) INTO @cap FROM Users WHERE gid = NEW.gid;
IF @cap > 6 THEN
SIGNAL SQLSTATE '45000' SET message_text = 'The chosen group is full!';
UPDATE Users SET gid = 0 WHERE sid = NEW.sid;
END IF;
END | AFTER | NULL | STRICT_TRANS_TABLES,NO_ENGINE_SUBSTITUTION | gpc353_1@132.205.%.% | utf8

```

Group Member:	Contributions:
Jonathan Cardone	<ul style="list-style-type: none"> • Modify Students Page <ul style="list-style-type: none"> ◦ Add/Remove Students ◦ SQL Queries in PHP ◦ CSS/HTML design • Modify Assignments Page <ul style="list-style-type: none"> ◦ Add/Remove/Rename Assignment type ◦ SQL Queries in PHP ◦ CSS/HTML design • Modify Groups Page <ul style="list-style-type: none"> ◦ Add/Remove Students to Groups ◦ Rename a Group ◦ Designate a Group Leader ◦ SQL Queries in PHP ◦ CSS/HTML Design • ER Diagram design • SQL table design
Simon Jacques	<ul style="list-style-type: none"> • Download Pages (Manage Files) <ul style="list-style-type: none"> ◦ “Archive Course” Functionality ◦ Display all unique File names ◦ Link from unique name to all File Versions ◦ Delete File Functionality ◦ Rollback File Functionality (for Leaders only) ◦ SQL Queries in PHP ◦ HTML/CSS Design • Upload Page <ul style="list-style-type: none"> ◦ Select Assignment type ◦ Choose File dropdown selection ◦ Upload file functionality ◦ SQL Queries in PHP ◦ HTML/CSS Design • SQL Trigger <ul style="list-style-type: none"> ◦ Triggers when a group is full (6 people) • ER Diagram design • SQL table design

Jonathan Linton	<ul style="list-style-type: none"> ● Home Page <ul style="list-style-type: none"> ○ Display User Info ○ Display Group Info (including Leader, Group members, and Available Files) ○ SQL Queries in PHP ○ HTML/CSS Design ● File Statistics Page <ul style="list-style-type: none"> ○ Select a student dropdown selection ○ Display all Files a user has uploaded/downloaded/deleted ○ Display count of each type of File interaction ○ SQL Queries in PHP ○ HTML/CSS Design ● General HTML/CSS of website <ul style="list-style-type: none"> ○ Colour scheme ○ Navigation bar design ○ Header/Footer Design ● Login & Logout Pages / Session work <ul style="list-style-type: none"> ○ Setting/Checking User information ○ Registering Session Variables ○ Permissions based on User status (Prof, TA or Student) ○ SQL Queries in PHP ○ HTML/CSS design ● Validation page (to prevent attacks) <ul style="list-style-type: none"> ○ isDangerous() method ○ Checks if any dangerous text is being inputted ● ER Diagram design ● SQL table design
Clément Hennebelle	<ul style="list-style-type: none"> ● Change Password Page <ul style="list-style-type: none"> ○ Check if old password is valid ○ Validate new password format ○ Display error messages ○ Store new password in PHP ○ SQL Queries in PHP ● Javascript Form validation <ul style="list-style-type: none"> ○ Check for proper format/syntax ● Functional Dependencies / 3NF work ● ER Diagram design ● SQL table design