Chapter 2

ANALYSIS PHASE

A. Requirement Analysis

This is the process of determining user expectations for the proposed system. This involves frequent communication with system users/respondents to determine specific feature expectations. The proponent conducted an interview from students, faculty and alumni who previously developed a study similar to proposal.

Summary of the Complete Requirements for the Proposed System:

Following is a summary of the list of complete requirements defined for the "File Repository Management System":

1. The administrator, faculty and student should able to login to the system.
2. The system should be able to provide a user friendly interface and comprehensive logical flow of pages which consists of main menu, administrator menu, faculty menu and student menu.
3. There are three user account types based on their level of security namely admin, faculty, and lastly student.
4. The system should have a basic function of file management and operation namely add, edit, delete and search.
5. Every student must be currently enrolled in a current academic year per semester to be able to access the system. This will be done by the administrator.
6. The administrator should manage first the students based on the current enrollee master list. Their account will be activated and ready to use during laboratory activities.
7. The administrator should load the standard directory structure every subjects that have laboratory activities.
8. The student should have the following functions over their file management interface:
    - upload file function which limited only to file type and file sizes that is set by the administrator;

- move file function from one directory to another;
- file deletion and it will automatically remove from the server;
- file indexing and searching to be able find any files;
- file filtering and sorting;
- file restoration and automatic backup;

9. The faculty should have setting control over their directory or folder. These controls are directory lock, directory permission and directory sharing to the students. It also provides a task notification function from student to faculty in every activities they do.
10. All the file related documents, activities, laboratory and references that set by the administrator should save or store in the file server.

B. System Design and Implementation

1. Detailed Architecture of the System

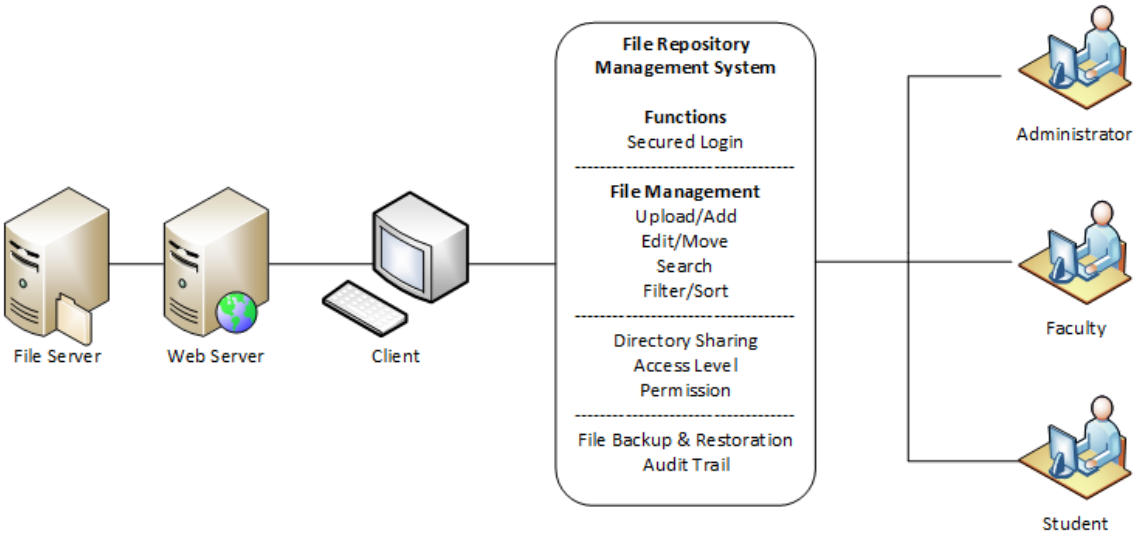

Figure 1

Architectural Diagram

2. UML Class Diagram

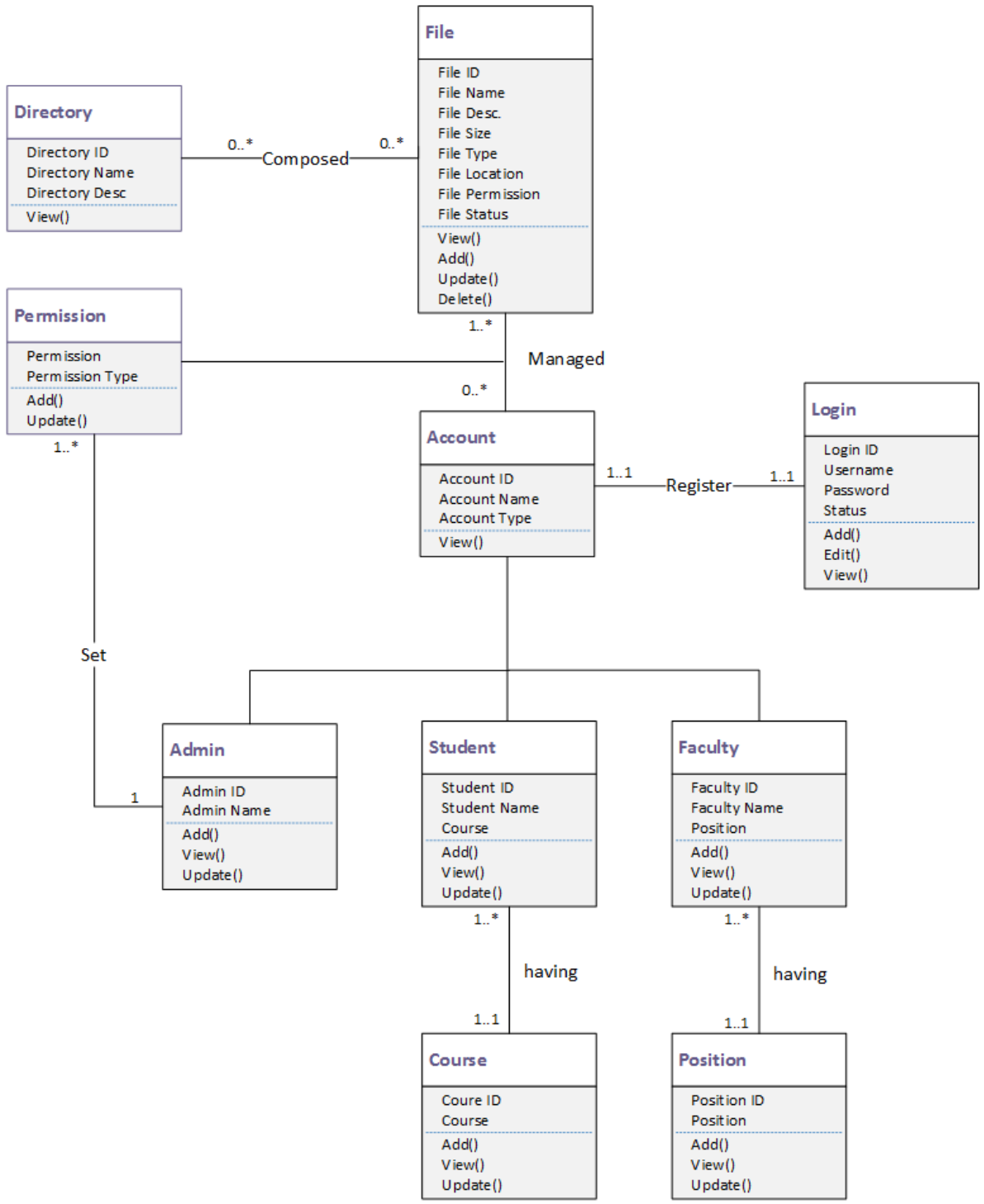

Figure 2

UML Class Diagram

3. Data Dictionary

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idAY	int(2)			No	None	AUTO_INCREMENT
2	cAcademicYear	varchar(50)	latin1_swedish_ci		Yes	NULL	
3	cSemester	varchar(255)	latin1_swedish_ci		Yes	NULL	

Table 1: Academic Year

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idAccountType	int(2)			No	None	AUTO_INCREMENT
2	cAccount	varchar(30)	latin1_swedish_ci		Yes	NULL	

Table 2: Account Type

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idCourse	int(2)			No	None	AUTO_INCREMENT
2	idDept	int(2)			Yes	NULL	
3	cCourseCode	varchar(20)	latin1_swedish_ci		Yes	NULL	
4	cCourseDesc	varchar(100)	latin1_swedish_ci		Yes	NULL	
5	cStatus	int(1)			Yes	NULL	

Table 3: Course Information

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idDept	int(2)			No	None	AUTO_INCREMENT
2	cDeptCode	varchar(10)	latin1_swedish_ci		Yes	NULL	
3	cDeptDesc	varchar(100)	latin1_swedish_ci		Yes	NULL	
4	cStatus	int(1)			Yes	NULL	

Table 4: Department Information

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idDirectory	int(3)			No	None	AUTO_INCREMENT
2	cDirectoryName	varchar(30)	latin1_swedish_ci		Yes	NULL	
3	cDirectoryDesc	varchar(100)	latin1_swedish_ci		Yes	NULL	
4	cParent	int(3)			Yes	NULL	
5	cChild	int(3)			Yes	NULL	
6	cStatus	int(1)			Yes	NULL	
7	cDate	datetime			Yes	NULL	

Table 5: Directory Information

#	Column	Type	Collation	Attributes	Null	Default
1	idFaculty	int(4)			Yes	NULL
2	idPosition	int(2)			Yes	NULL
3	cLastName	varchar(50)	latin1_swedish_ci		Yes	NULL
4	cFirstName	varchar(50)	latin1_swedish_ci		Yes	NULL
5	cMiddleName	varchar(50)	latin1_swedish_ci		Yes	NULL
6	cExtName	varchar(20)	latin1_swedish_ci		Yes	NULL
7	cDOB	date			Yes	NULL
8	cAddress	varchar(100)	latin1_swedish_ci		Yes	NULL
9	cStatus	int(1)			Yes	NULL

Table 6: Faculty Information

#	Column	Type	Collation	Attributes	Null	Default
1	idFiles	varchar(14)	latin1_swedish_ci		No	None
2	idDirectory	int(2)			Yes	NULL
3	cFileName	varchar(50)	latin1_swedish_ci		Yes	NULL
4	cFileDesc	varchar(100)	latin1_swedish_ci		Yes	NULL
5	cFileType	varchar(20)	latin1_swedish_ci		Yes	NULL
6	cFileSize	decimal(2,0)			Yes	NULL
7	cUploadBy	int(8)			Yes	NULL
8	dateUploaded	datetime			Yes	NULL

Table 7: File Information

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idLogin	int(2)			No	None	AUTO_INCREMENT
2	cUserName	varchar(25)	latin1_swedish_ci		Yes	NULL	
3	cPassword	varchar(32)	latin1_swedish_ci		Yes	NULL	
4	idAccount	int(8)			Yes	NULL	
5	cStatus	int(1)			Yes	NULL	

Table 8: Login Information

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idPosition	int(2)			No	None	AUTO_INCREMENT
2	cPosition	varchar(30)	latin1_swedish_ci		Yes	NULL	

Table 9: Position Information

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idRoot	int(11)			No	None	AUTO_INCREMENT
2	idAY	int(2)			Yes	NULL	
3	idDirectory	int(4)			Yes	NULL	

Table 10: Root Directory

#	Column	Type	Collation	Attributes	Null	Default	Extra
1	idStudent	int(8)			No	None	
2	cLastName	varchar(50)	latin1_swedish_ci		Yes	NULL	
3	cFirstName	varchar(50)	latin1_swedish_ci		Yes	NULL	
4	cMiddleName	varchar(50)	latin1_swedish_ci		Yes	NULL	
5	cExtName	varchar(10)	latin1_swedish_ci		Yes	NULL	
6	idCourse	int(2)			Yes	NULL	
7	cDOB	date			Yes	NULL	
8	cAddress	varchar(100)	latin1_swedish_ci		Yes	NULL	
9	cStatus	int(1)			Yes	NULL	

Table 11: Student Information

4. Use Case Diagram

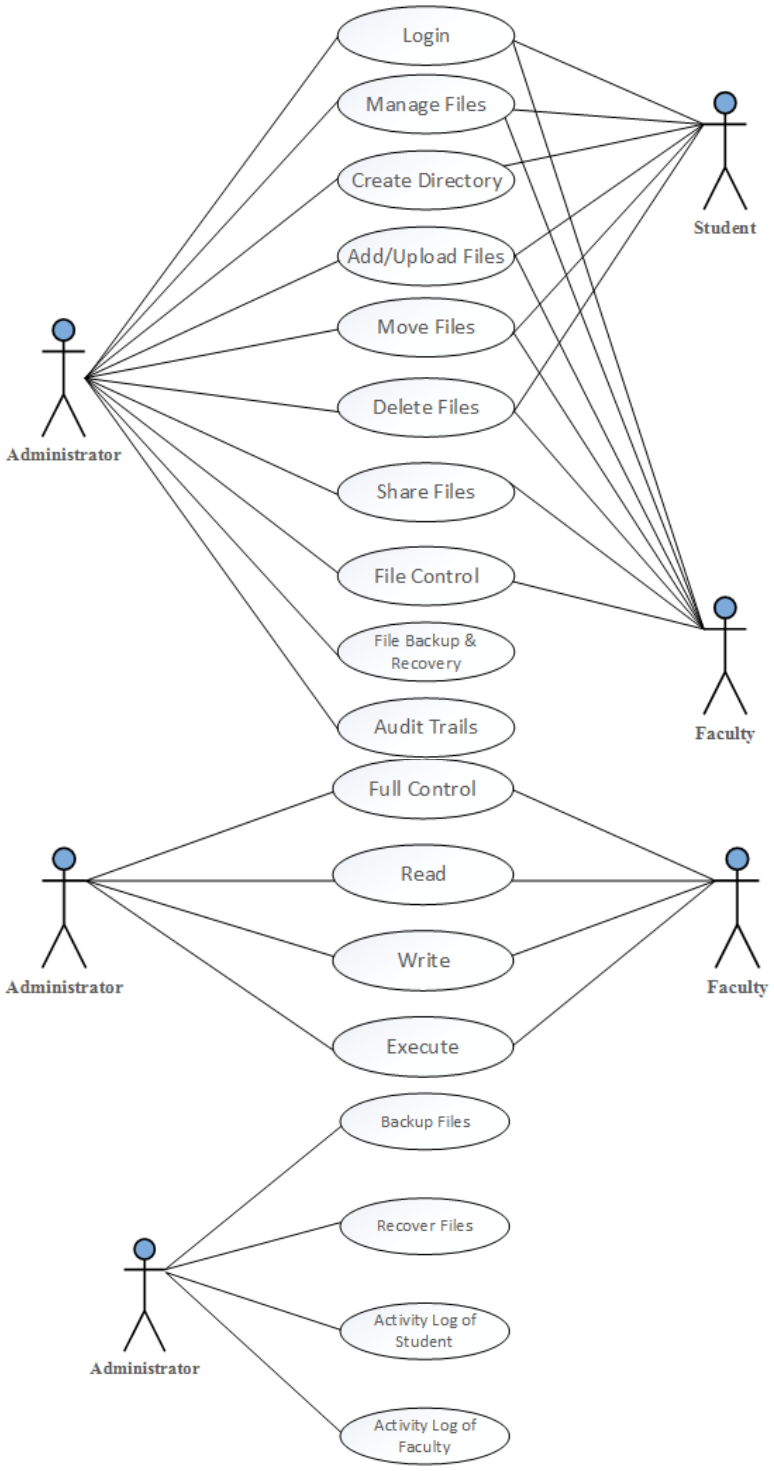

Figure 3: Use Case Diagram

5. **Use Case Diagram Descriptions**

Use Case ID:	001
Use Case Name:	Manage Files
Actors:	Administrator, Faculty and Student
Description:	The process allows the actors to manage their files.
Pre-Conditions:	The standard directory structure exist in database
Post-Conditions:	The actors can manage their directory and files
Normal Flow:	1. They can view the directory tree of their files. 2. They can see the operation of their files

Table 12 Manage Files

Use Case ID:	002
Use Case Name:	Create Directory
Actors:	Administrator, Faculty and Student
Description:	The process allows the actors to create their own directory
Pre-Conditions:	The new directory does not exist in the database and file server.
Post-Conditions:	The system will save the new directory information and allow them to see it.
Normal Flow:	1. The system will generate new id for directory. 2. The actors will enter the details.

Table 13 Create Directory

Use Case ID:	003
Use Case Name:	Add / Upload Files
Actors:	Administrator, Faculty and Student
Description:	The process allows the actors to add or upload their files.
Pre-Conditions:	The new file does not exist in the database and file server.
Post-Conditions:	The system will save the new file information and allow them to see it.
Normal Flow:	1. The system will generate new id for files. 2. The actors will enter the details.

Table 14 Add/Upload Files

Use Case ID:	004
Use Case Name:	Move Files
Actors:	Administrator, Faculty and Student
Description:	The process allows the actors to move their files to desired directory.
Pre-Conditions:	The files exist in the database and file server.
Post-Conditions:	The system will save the new file location and allow them to see it.
Normal Flow:	1. The actors will enter the details.

Table 15 Move Files

Use Case ID:	005
Use Case Name:	Delete Files
Actors:	Administrator, Faculty and Student
Description:	The process allows the actors to delete or remove their files.
Pre-Conditions:	The new files exist in the database and file server.
Post-Conditions:	The system will remove the file information and create a log file for audit trail.
Normal Flow:	1. The administrator will see the deleted files in event log

Table 16 Delete Files