

Assessment Task 1 - Part 1 – Group 11 (Cmp06)

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a) User-Story Table (Backlog)

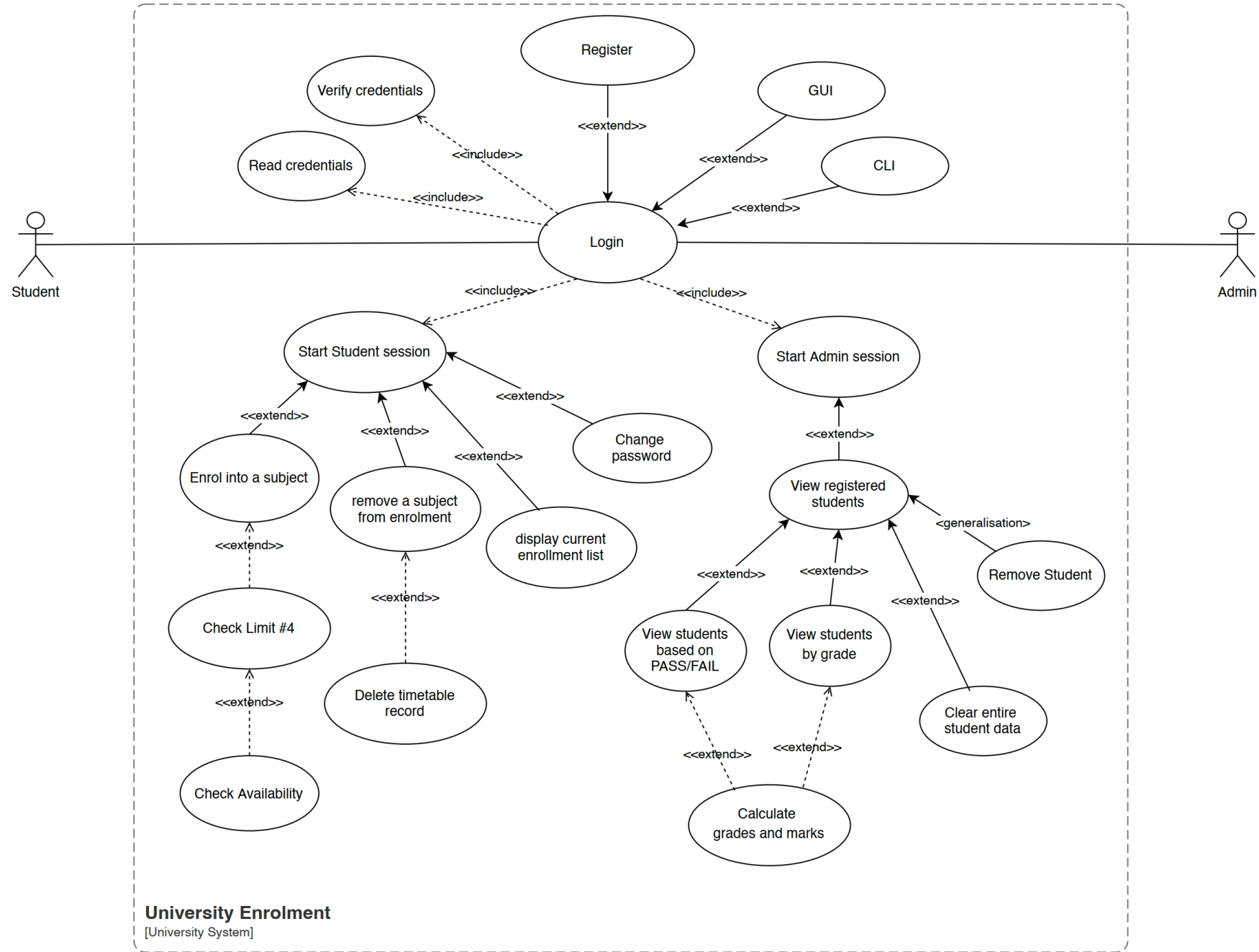
ID	User	Action	Result	Function
101	Student	I want to read Student email/password	So, I can get the email/password for verification	readCredentials
102	Student	I want to verify email/password	To allow access	verifyCredentials
103	Student	I want to Login	So, I can access My student's enrolment account	login
104	Student	I want to Register	So, I can get a unique Student ID to be able to login	registerStudent
201	Admin	I want to read Admin email/password	So, I can get the email/password for verification	readCredentials
202	Admin	I want to verify email/password	To allow access	verifyCredentials
203	Admin	I want to Login	So, I can access My student's account	login
301	Student	I want to enroll in subject	So, I can enroll in a subject	enrollInSubject
302	Student	I want to verify subject count	To allow enroll new subject	verifySubjectCount
401	Student	I want to remove subject	So, I can remove a subject from the student's enrolment list	removeSubject
501	Student	I want to show enrolment list	So, I can display the enrolment list and see all subjects I am enrolled in	showEnrolmentList
601	Student	I want to change password	So, I can update the security of My student's enrolment account	changePassword
701	Admin	I want to view registered students	So, I can display a comprehensive list of all registered students	viewAllStudents
702	Admin	I want to view students by grade	So, I can display students categorized by their grades	viewStudentsByGrade
703	Admin	I want to view students based on Pass/Fail	So, I can display students categorized into Pass/Fail groups	viewPassFailStudents
801	Admin	I want to remove student	So, I can remove a specific student from the system	removeStudent
802	Admin	I want to Clear student data	So, I can erase all data associated with a student	clearStudentData

b) Documentation Testing

Test Case ID	Test Case	Correctness	Consistency	Completeness	Expandability	Recommendation
T001	Student must register to the system using their valid email, password. On sign up, student can get an auto-generated unique student ID	5	5	5	3	Read user email/ password Verify email/ password Sign up into the system Generate unique student ID Check valid student email, password. If invalid, notify students
T002	Registered student can login to access the account	5	5	5	3	Read user email/ password Verify email/ password Login into the system Check valid student email, password. If invalid, notify students
T003	Student can enrol into a subject	5	5	5	5	Show only available subjects in the semester to enrol Read subject ID to enrol Check limit of enrolled subjects in the enrolment list: - If the number of subjects <4: Add selected subject to the enrolment list - If the number of subjects =4: Notify the student Auto-generate and allocate a random subject mark to the subject Students can select many subjects to enrol at once
T004	Student can remove a subject from enrolment list	5	5	5	1	Read subject ID Find the subject by ID Remove the subject from enrolment list

T005	Student can view current enrolment list	2	3	2	3	Students can view this semester's enrolment list Or students can view all semester's enrolment list
T006	Student can change password	3	5	2	3	Read new password Update the password If the new password is the same as old password, notify the student
T007	Admin can login to their sub-system	5	5	5	3	Read user email/ password Verify email/ password Login into the system Check valid admin email, password. If invalid, notify students
T008	Admin can view all registered students	5	5	5	0	N/A
T009	Admins can organize and view students by grade	5	5	5	1	Read student grade Find all the student by grade View the list of all student by grade
T010	Admins can partition and view students based on PASS/FAIL categories	3	5	5	1	Read student PASS/FAIL categories Find all the student by PASS/FAIL categories View the list of all student by PASS/FAIL categories
T011	Admins can remove a student	2	3	3	5	Read student ID Find the student by ID Delete student record Admin can select many students to remove Need confirmation before delete student record
T012	Admins can clear the entire students.data file store	1	1	1	5	Admins cannot delete the entire file. Admins can only delete the student enrolment and student data Admins need permission from manager to delete the student data Need confirmation before delete student data

c) Use-case Diagram



The above use case diagram illustrates Actors, including both Students and Admins, along with their associated classes and the relationships between them

Actors:

- **Student:** The primary user of the system, who manage their enrollment and view their academic progress.
- **Admin:** A user with elevated privileges who can manage registered students and the system.

Goals:

- **Student:** The student's goal is to use the system to manage their enrolment and view their academic progress.
- **Admin:** The admin's goal is to use the system to manage student enrolments and the system.

Cases:

- **Student enrolling in a subject:** The student uses the system to enrol in 4 subjects each semester, after checking its availability.
- **Student viewing their current enrolment list:** The student uses the system to view their current enrolment list, which shows all of the subjects they are enrolled in.
- **Student removing a subject from their enrolment list:** The student uses the system to remove the subject they want to remove from their enrolment list.
- **Student changing their password:** The student uses the system to change login in password.
- **Admin viewing registered students:** The admin uses the system to view a list of all registered students.
- **Admin removing a student:** The admin uses the system to remove a student from the system.
- **Admin viewing students based on PASS/FAIL:** The admin uses the system to view a list of students based on whether they passed or failed a subject.
- **Admin clearing entire student data:** The admin uses the system to clear all student data from the system.
- **Admin viewing students by grades:** The admin uses the system to view a list of students based on their grades in a subject.

Relationships:

- **Student to system:** The student uses the system to manage their enrolment and view their academic progress.
- **Admin to system:** The admin uses the system to manage registered students and the system.

d) Class Diagram

The class diagram had Admin and Student roles, and that is displayed as a Student Class and Admin classes associated with generalization to User class. User class has required attributes and also has functional operations such as login, and registering students some operation is related to the system. The other main class is defined as a university and also displays buildings, rooms and courses associated with relationships between them. Student class associated with the Enrolled Subjects class as a list of object Enrolled Subject. And also, other classes followed the class hierarchy standard as well similar to those classes. In Extra, we have implemented the main timetable class, my timetable classes are linked with the Subject link class as attributes such as time, location, length, ID, and checking whether it is online. We have designed the following object-oriented structure by brainstorming the whole system, and how it works.

