Part 1: Analysis and Design

Friday 2PM-4PM - Cmp1-03 - CB11 Tutor: Kamal Group# 5		
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User-Story Backlog

User Stories for Student Operations

Student Registration

- **100**: *As a student, I want to register with my name, email, and password so that I can access the enrolment system.*

- **101**: *As a student, I want my email to be validated to ensure it ends with "@university.com" so that I can use the system.*

- **102**: *As a student, I want my password to be validated to ensure it starts with an uppercase letter, contains at least five letters, and is followed by three digits so that my account is secure.*

- **103**: *As a student, I want to receive a unique 6-digit student ID upon registration so that I am uniquely identified in the system.*

Student Login

- **110**: *As a student, I want to log into the system using my email and password so that I can access my account.*

Subject Enrolment

- **200**: *As a student, I want to enrol in a subject so that I can start my studies.*

- **201**: *As a student, I want to be notified if I attempt to enrol in more than four subjects so that I comply with the enrolment rules.*

- **202**: *As a student, I want to view my current enrolment list so that I can keep track of my subjects.*

- **203**: *As a student, I want to remove a subject from my enrolment list so that I can adjust my studies as needed.*

Password Management

- **300**: *As a student, I want to change my password so that I can maintain the security of my account.*

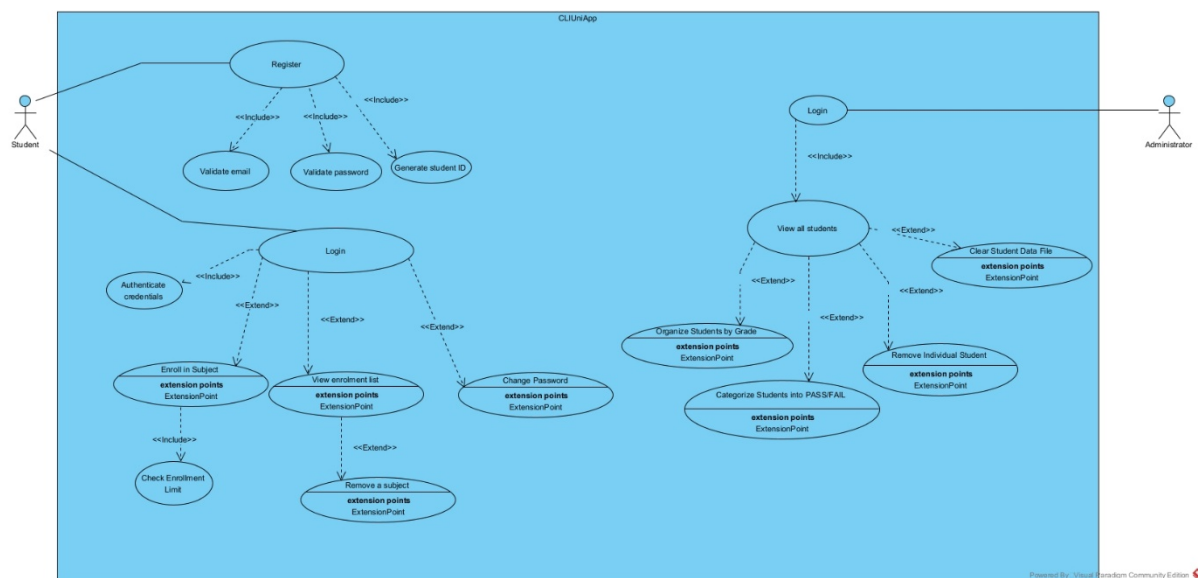## User Stories for Admin Operations

Student Management

- **400**: *As an admin, I want to view all registered students so that I can manage their information.*

- **401**: *As an admin, I want to organize students by grade so that I can assess their academic performance.*

- **402**: *As an admin, I want to categorize students into PASS/FAIL so that I can manage academic records.*

- **403**: *As an admin, I want to remove an individual student from the system so that I can manage student records.*

- **404**: *As an admin, I want to clear the entire student data file so that I can reset the system if needed.*

Mapping to Requirements Table (Backlog)

ID	User	Action	Result	Function
100	Student	Register with name, email, and password	Access to the enrolment system	Registration
101	Student	Validate email	Ensure email meets system requirements	Email Validation
102	Student	Validate password	Ensure password meets security criteria	Password Validation
103	Student	Receive a unique student ID	Unique identification in the system	ID Generation
110	Student	Log in with email and password	Access to the student account	Login
200	Student	Enroll in a subject	Start studies	Subject Enrollment
201	Student	Attempt to enroll in more than four subjects	Notification about enrollment limit	Enrollment Check

202	Student	View current enrollment list	Keep track of enrolled subjects	Enrollment View
203	Student	Remove a subject from the enrollment list	Adjust study plan	Subject Removal
300	Student	Change password	Maintain account security	Password Management
400	Admin	View all registered students	Manage student information	Student Management
401	Admin	Organize students by grade	Assess academic performance	Grade Management
402	Admin	Categorize students into PASS/FAIL	Manage academic records	Categorization
403	Admin	Remove an individual student	Manage student records	Record Removal
404	Admin	Clear entire student data file	Reset system	Data Management

Use Case Diagram

Class Diagram

UniApp
- -student system
- -admin system
- -crud()
- -store data()
- -manage data()
- -generate student id()

Admin
- -subsystem
- -name
- -password
- -staff id
- -view registered student()
- -organize and view by grades()
- -categorize pass or fail()
- -remove sutdent()
- -clear data()

UserInterface
- -CLI component
- -GUI component
- +display CLI()
- +display GUI()

Student
- -student id
- -name
- -password
- -email
- -enrollment list
- +register()
- +login()
- -enroll subject()
- -remove subject()
- -view enrollment list()
- -change password()

Subject
- -subject id
- -name
- -grade
- -mark
- -track()
- -notify()
- -calculate grade()
- -assign make()

Has

Use

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Manages

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Use

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Enrollment

1..4