Elicitation Session #4 - Requirements Specifications (Use Case Specifications)

BUS4053-0001

Prof. Tyler Kimmel

November/19/2024

Submitted by – Group 7

Team Members	Student ID
Nishita Ahuja	101540366
Musaab Shirgar	101490106
Shilpa Sosa George	101547819
Muhammad Asad Bin Faruq	101552479
Labdhi Bharat Shah	101550197
Parbon Banerjee	101469825
Akshay Kapoor	101564423

UC01 – Create User

Use Case Description
This use case describes the process of creating new user accounts in the Learning Management System (LMS). The administrator can create single users manually or multiple users in bulk, either by uploading a CSV file or integrating with the Student Information System (SIS). The system validates user data and provides confirmation upon successful user creation.

Actors
Primary: Admin
Secondary: Student Information System (SIS)

Pre-Conditions
- Admin is authenticated and has the necessary permissions to create users.
- Student Information System (SIS) has APIs to integrate with the Learning Management System (Brightspace).

Post-Condition
- A new user is created with the selected role (Student, Faculty, Administrator) and stored in the system database.
- Administrator will receive notification for successful user creation.

Basic Flow

	Step	Alternative Flow
1	This use case starts when the administrator navigates to the "Create New Users" page.	
2	The system displays the "Create New Users" page.	
3	The system displays option to create a single user or multiple users.	AF03 – Create Multiple Users
4	The administrator chooses to create a single user.	
5	The system prompts the administrator to input new user information.	
6	The administrator enters the user's personal and account information.	
7	The system validates the input against predefined rules.	AF01 – Invalid User Input AF02 – User Already Exists
8	The administrator assigns the appropriate institution or system role.	
9	The system assigns the role to the user.	
10	The administrator confirms the user information is complete.	
11	The system creates the user account.	
12	The system displays a confirmation message.	AF06 – Notification Error

13	The use case ends.	

AF01 – Invalid User Input

	Step	Alternative Flow, Data, Rules
1	This flow starts after Step 7 of the Basic Flow when the system determines that the user input is invalid (e.g., incorrect email format, incorrect name format, use of special character).	DE03
2	The system highlights the fields with errors and provides error messages indicating the specific issues (e.g., "Email format is incorrect" or "invalid characters detected").	
3	The system prompts the admin to correct the invalid input and resubmit.	
4	The flow resumes at the admin corrects the errors and resubmits the form.	

AF02 – User Already Exists

	Step	Alternative Flow, Data, Rules
1	This flow starts after step 7 of the Basic Flow, step 6 of AF03 and step 7 of AF05, when the system detects that the provided user id is already associated with an existing user.	BR01
2	The system displays an error message indicating that the user id is already registered.	
3	The system prompts the admin to correct the user id or cancel the creation process.	DE04
4	The flow resumes at Step 2 of the Basic Flow after the admin provides correct details.	

AF03 – Create Multiple Users

	Step	Alternative Flow, Data, Rules
1	This flow starts at step 3 of the basic flow when the administrator chooses to create multiple users.	
2	The system displays an option to upload CSV or integrate with Student Information System (SIS).	
3	The administrator chooses to upload CSV file.	AF05 – Integrate with SIS
4	The system prompts the admin to upload a CSV file.	
5	The administrator uploads the CSV file containing user data.	

	Step	Alternative Flow, Data, Rules
6	The system validates the data in the CSV file.	AF06 - CSV Upload Error AF02 – User Already Exists
7	The system creates user accounts in bulk.	
8	The system displays a confirmation message.	AF06 – Notification Error

AF04 – CSV Upload Error

	Step	Alternative Flow, Data, Rules
1	This flow starts at step 6 of AF03 when the system validates the uploaded CSV file having user information. (missing data, incorrect data format)	BR05
2	The system generates an error report for the incorrect records in the CSV file.	
3	The admin is prompted to correct the errors in the CSV file and re-upload it.	
4	The flow resumes at the CSV upload step 3 in AF03 after the file is corrected.	

AF05 – Integrate with SIS

	Step	Alternative Flow, Data, Rules
1	This flow starts at step 3 of AF03 when the system displays an option to create multiple users using CSV file upload or integrate with SIS.	BR04
2	The administrator chooses to integrate with SIS.	
3	The system prompts admin to create a connection with SIS Database.	
4	The administrator initiates data import from the SIS.	
5	The SIS gathers data from its sources.	
6	The SIS feeds the data to the LMS.	
7	The system validates the data in the CSV file.	AF04 – CSV Upload Error AF02 – User Already Exists
8	The system creates user accounts in bulk based on the SIS data.	
9	The system displays a confirmation message.	

AF06 – Notification Error

	Step	Alternative Flow, Data, Rules
1	This flow starts at when a notification error occurs after new user creation.	BR04
2	The system displays an error message: "Failed to send notification. Please try again later."	

	Step	Alternative Flow, Data, Rules
3	The flow end.	

AF07 – System Error

	Step	Alternative Flow, Data, Rules
1	This flow starts at any step when system error occurs	
2	System informs user that error occurs	
3	Use case ends	

Business Rules

ID	Name	Business Rule
BR01	Unique User Information	Each user's id must be unique in the system to prevent duplicate accounts.
BR02	Data Validation Rules	User input data must follow validation rules: email format, missing data, data format, etc.
BR03	Error Logging	Any system errors encountered must be logged for auditing and troubleshooting, with appropriate error messages shown to the user.
BR04	SIS Data Mapping	Data mapping between the SIS and LMS must be correctly configured for successful user creation through SIS integration.
BR05	CSV File Format	CSV files for bulk user creation must adhere to a specific format, including headers and data types.

Data Dictionary

ID	Business Name	Description	Validation Rule	Calculation Rule	Sample Data
DE01	Institution Role	User's role within the institution (e.g., Student, Faculty, Admin).	Must be one of: "Student", "Faculty", "Admin".	N/A	"Student", "Admin"
DE02	System Role	User's role within the LMS system (e.g., Instructor, Teaching Assistant, Observer)	Must be one of the predefined system roles in the LMS		"Instructor", "Observer"
DE03	Email Address	Email is used as a unique identifier for user accounts.	Must follow email format: example@domain.com.	Must be unique.	"john.doe@example.com"

ID	Business Name	Description	Validation Rule	Calculation Rule	Sample Data
DE04	User ID	Unique identifier for each user in the system, automatically generated.	Must be a positive integer, auto generated by the system.	N/A	"1002345"
DE05	First Name	User's First Name	Must contain only letters, spaces, hyphens, and apostrophes	Maximum 50 characters	"John"
DE06	Last Name	User's Last Name	Must contain only letters, spaces, hyphens, and apostrophes	Maximum 50 characters	"Doe"
DE07	Notification Message	Messages sent by the system to admin regarding successful user creation.	Max 250 characters.	N/A	"User successfully created."
DE08	Status	User's account status (e.g. Active, Inactive)	Must be either "Active" or "Inactive"	N/A	Active