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**Business Analysis Use Case Specification**

**Submitted by:**

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Use Case Specification Template

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# **Overview**

The Business Analysis Use Case Specification Template is intended to provide business analysts working on George Brown College’s Learning Management System(LMS) initiatives with the structure and guidance to define detailed requirements, specifications, and models necessary to complete Requirements. A Use Case Specification describes the system interaction between an actor/robot and the solution in the process of achieving a goal

# **Use Case Specification Sections**

* Use Case Specification Summary (Mandatory)
* Basic Flow (Mandatory)
* Alternate Flow(s)
* Business Rule(s) (Mandatory)
* Business Data Catalogue (Mandatory)
* Notification(s)
* User Interface(s) (Mandatory)
* Report Table(s)
* Additional Details

# **Using the Use Case Specification Template**

The Use Case Specification provides the highest amount of granularity and detail for each process to be automated in future state. When using the Use Case Specification:

* Create a single Use Case Specification for each Process Activity
* Save each Use Case Specification following the Best Practice Standards defined
* Embed each Use Case Specification as a file within the Requirements Template

# **Use Case Specification Summary**

The Use Case Specification provides the highest amount of granularity and detail for each process to be automated in future state. The summary section defines the focus of this use case specification, actors, conditions, and trace to L3 process.

|  |  |  |
| --- | --- | --- |
| **Use Case Name** | Create User | |
| **Use Case Unique Identifier** | UC001 | |
| **L3 Process Map Trace** | FSPM001 | |
| **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) | |
| **Conditions** | | |
| **Pre-Conditions:** | | **Post-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). | | * 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**

The set of steps performed by the actor and the solution during the execution of the use case. The basic flow represents the shortest or simplest successful path that accomplishes the goal of the actor.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Step** | **Alternative Flow** | **UI/Notification** |
| 1 | This use case starts when the administrator navigates to the "Create New Users" page. |  |  |
| 2 | The system displays the "Create New Users" page. |  | UI001 |
| 3 | The system displays option to create a single user or multiple users | AF03 – Create Multiple Users | UI001 |
| 4 | The administrator chooses to create a single user. |  | UI001 |
| 5 | The system prompts the administrator to input new user information |  | UI002 |
| 6 | The administrator enters the user's personal and account information.  **DE05-First Name**  **DE06-Last Name**  **DE03-Email Address**  **DE09-User Name**  **DE10-Password** |  | UI002 |
| 7 | The system validates the input against predefined rules.    **BR01- Unique User Information**  **BR02-Data Validation Rules**  **DE03-Email Address**  **DE09-User Name** | AF01 – Invalid User Input  AF02 – User Already Exists | UI002 |
| 8 | The administrator assigns the appropriate institution or  system role. |  | UI002 |
| 9 | The system assigns the role to the user. |  | UI002 |
| 10 | The administrator confirms the user information is complete. |  | UI002 |
| 11 | The system creates the user account.  **DE04-User ID**  **DE08-Status** |  | UI002 |
| 12 | The system displays a confirmation message. | AF06 – Notification Error | NO001 |
| 13 | The use case ends. |  |  |

# **Alternate Flow(s)**

Alternative flows describe any other paths that may be followed to allow the actor to successfully achieve the goal of the use case. Exception flows describe the desired response by the solution when the goal is unachievable, and the use case cannot be

successfully completed. Replicate this table for each Alternate/Exception flow derived from the Basic Flow.

| **AF Name & ID** | | **(AF01 – Invalid User Input)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 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). | |  | NO002 |
| 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”). | |  | NO002 |
| 3 | The system prompts the admin to correct the invalid input and resubmit. | |  | UI002 |
| 4 | The flow resumes at the admin corrects the errors and resubmits the form. | |  | UI002 |

| **AF Name & ID** | | **(AF02 – User Already Exists)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 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. | |  | NO003 |
| 2 | The system displays an error message indicating that the user id is already registered. | |  | NO003 |
| 3 | The system prompts the admin to correct the user id or cancel the creation process. | |  | UI002 |
| 4 | The flow resumes at Step 2 of the Basic Flow after the admin provides correct details. | |  | UI002 |

| **AF Name & ID** | | **(AF03 – Create Multiple Users)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 1 | This flow starts at step 3 of the basic flow when the administrator chooses to create multiple users. | |  | UI003 |
| 2 | The system displays an option to upload CSV or integrate with Student Information System (SIS). | |  | UI003 |
| 3 | The administrator chooses to upload CSV file. | | AF05 – Integrate with SIS | UI003 |
| 4 | The system prompts the admin to upload a CSV file. | |  | UI003, NO004 |
| 5 | The administrator uploads the CSV file containing user data. | |  | NO001 |
| 6 | The system validates the data in the CSV file. | | AF06 - CSV Upload Error  AF02 – User Already Exists | NO001 |
| 7 | The system creates user accounts in bulk. | |  |  |
| 8 | The system displays a confirmation message | | AF06 – Notification Error |  |

| **AF Name & ID** | | **(AF04 – CSV Upload Error)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 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) | |  | NO005 |
| 2 | The system generates an error report for the incorrect records in the CSV file. | |  | UI003 |
| 3 | The admin is prompted to correct the errors in the CSV file and re-upload it. | |  | UI003 |
| 4 | The flow resumes at the CSV upload step 3 in AF03 after the file is corrected. | |  |  |

| **AF Name & ID** | | **(AF05 – Integrate with SIS)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 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. | |  | NO006 |
| 2 | The administrator chooses to integrate with SIS. | |  | UI003 |
| 3 | The system prompts admin to create a connection with SIS Database. | |  | UI003 |
| 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. | |  |  |

| **AF Name & ID** | | **(AF06 – Notification Error)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 1 | This flow starts at when a notification error occurs after new user creation. | |  |  |
| 2 | The system displays an error message: "Failed to send notification. Please try again later." | |  | NO007 |
| 3 | The flow ends. | |  |  |

| **AF Name & ID** | | **(AF07 – System Error)** | | |
| --- | --- | --- | --- | --- |
|  | **Step** | | **Alternative Flow** | **UI/Notification** |
| 1 | This flow starts at any step when system error occurs | |  |  |
| 2 | The system informs user that error occurs | |  |  |
| 3 | Use case ends | |  |  |

# **Business Rule(s)**

Business Rules define the criteria for behavior, decision making, and logic to be realized in the solution.

| **BR ID** | **Rule Name** | **Rule Type** | **Description** | **Step**  **(In Use Case)** |
| --- | --- | --- | --- | --- |
| BR001 | Unique User Information | Data Validation | Each user's ID must be unique in the system to prevent duplicates. | 7 |
| BR002 | Data Validation Rules | Validation | User input data must follow validation rules (e.g., email format). | 7 |
| BR003 | Error Logging | Logging | System errors must be logged for auditing and troubleshooting. | 7 |
| BR004 | SIS Data Mapping | Data Mapping | Data mapping between the SIS and LMS must be correctly configured. | AF05 |
| BR005 | CSV File Format | Validation | CSV files for bulk user creation must adhere to a specific format. | AF03 |

# **Business Data Catalogue**

The Business Data Catalogue refers to business knowledge used in the process of achieving the Use Case goal.

| **BD ID** | **Business Term** | **Business Term Definition** | **Existing/ New** | **Business/ Formatting Rules** | **Business Term Example** | **Step(s)**  **(In Use Case)** |
| --- | --- | --- | --- | --- | --- | --- |
| DE001 | Institution Role | User's role within the institution (e.g., Student, Faculty, Admin). | Existing | Must be one of: "Student", "Faculty", "Admin". | "Student" | 8 |
| DE002 | System Role | User's role within the LMS system (e.g., Instructor, Teaching Assistant, Observer). | Existing | Must be one of the predefined roles in the LMS. | "Instructor" | 8 |
| DE003 | Email Address | Email is used as a unique identifier for user accounts. | New | Must follow email format: example@domain.com. | "john.doe@example.com" | 7 |
| DE004 | User ID | Unique identifier for each user in the system, automatically generated. | New | Must be a positive integer, auto generated by the system. | "1002345" | 11 |
| DE005 | First Name | User's First Name. | New | Must contain only letters, spaces, hyphens, and apostrophes. | "John" | 6 |
| DE006 | Last Name | User's Last Name. | New | Must contain only letters, spaces, hyphens, and apostrophes. | "Doe" | 6 |
| DE007 | Notification Message | Messages sent by the system to admin regarding successful user creation. | New | Max 250 characters. | "User successfully created." | 12 |
| DE008 | Status | User's account status (e.g., Active, Inactive). | New | Must be either "Active" or "Inactive". | "Active" | 11 |
| DE009 | User Name | Unique username for the user account. | New | Must be alphanumeric and unique across the system. | "johndoe123" | 6, AF01, AF02 |
| DE010 | Password | User's password for accessing the system. | New | Must meet security requirements (e.g., minimum 8 characters). | "Password@123" | 6 |

# **User Interface(s)**

User Interface Specifications describes the content presentation (screens, forms, navigation) the solution uses in the process of achieving the Use Case goal

**Summary of User Interfaces**

| **UI ID** | **UI Name** | **UI Description** | **Step(s)**  **(In Use Case)** |
| --- | --- | --- | --- |
| UI001 | Create New Users Page | Page with a form to create users, providing options for single or bulk user creation. | 1, 2, 3 |
| UI002 | Single User Creation Form | Form for entering personal and account information for a single user. | 4, 5, 6 |
| UI003 | Bulk User Upload Interface | Interface for uploading and validating a CSV file for multiple users. | AF03 |

**User Interface Specification – Screen or Mock-Up**

Create a separate table for each Screen or Mock-Up within the Use Case. A screen refers to an existing interface, where as a mock-up is a representation of a new interface.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UI ID** | UI001 | **UI/ Screen Name:** | | Create New Users Page | |
| **UI Description** | | Page with a form to create users, providing options for single or bulk user creation. | | | |
| **UI Screen** |  | | | | |
| **Component ID** | **Component Name** | **Data Element ID** | **Type** | **Displayed/ Enabled Rules** | **Label** |
| C001 | Single User Button | N/A | Button | Displayed if admin has permissions. | Single User |
| C002 | Multiple Users Button | N/A | Button | Displayed if admin has permissions. | Multiple Users |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UI ID** | UI002 | **UI/ Screen Name:** | | Single User Creation Form | |
| **UI Description** | | Form for entering personal and account information for a single user. | | | |
| **UI Screen** |  | | | | |
| **Component ID** | **Component Name** | **Data Element ID** | **Type** | **Displayed/ Enabled Rules** | **Label** |
| |  | | --- | | CO001 |  |  | | --- | |  | | First Name Field | |  | | --- | | DE005 |  |  | | --- | |  | | Text Field | Required field; must contain only letters, spaces, hyphens, and apostrophes. | |  | | --- | | First Name | |
| |  | | --- | | CO002 | | |  | | --- | | Last Name Field |  |  | | --- | |  |  |  | | --- | |  | | DE006 | |  | | --- | | Text Field | | Required field; must contain only letters, spaces, hyphens, and apostrophes. | |  | | --- | | Last Name | |
| |  | | --- | | CO003 | | Institutional Email Field | |  | | --- | | DE003 |  |  | | --- | |  |  |  | | --- | |  | | |  | | --- | | Text Field | | Required field; must follow email format. | Institutional Email |
| |  | | --- | | CO004 | | |  | | --- | | User Name Field |  |  | | --- | |  | | |  | | --- | | DE004 | | |  | | --- | | Text Field | | Required field; unique across the system. | User Name |
| |  | | --- | | CO005 | | |  | | --- | | Password Field |  |  | | --- | |  |  |  | | --- | |  | | DE010 | |  | | --- | | Password | | Required field; must meet security guidelines | New Password |
| |  | | --- | | CO006 | | Verify Password Field | DE010 | |  | | --- | | Password |  |  | | --- | |  |  |  | | --- | |  | | Must match the "New Password" field. | Verify Password |
| |  | | --- | | CO007 | | |  | | --- | | Institutional Roles List |  |  | | --- | |  |  |  | | --- | |  | | |  | | --- | | DE001 | | Dropdown | Predefined roles such as Student, Faculty, Admin. | Institutional Roles |
| |  | | --- | | CO008 | | |  | | --- | | System Roles List |  |  | | --- | |  |  |  | | --- | |  | | |  | | --- | | DE002 | | Dropdown | Predefined LMS system roles. | System Roles |
| |  | | --- | | CO009 | | |  | | --- | | Submit Button |  |  | | --- | |  |  |  | | --- | |  |  |  | | --- | |  | | N/A | Button | Enabled when all required fields are valid. | Submit |
| |  | | --- | | C010 | | |  | | --- | | Cancel Button |  |  | | --- | |  | | |  | | --- | | N/A | | |  | | --- | | Button | | Always enabled. | |  | | --- | | Cancel | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UI ID** | UI003 | **UI/ Screen Name:** | | Bulk User Upload Interface | |
| **UI Description** | | Interface for uploading and validating a CSV file for multiple users. | | | |
| **UI Screen** |  | | | | |
| **Component ID** | **Component Name** | **Data Element ID** | **Type** | **Displayed/ Enabled Rules** | **Label** |
| C001 | Upload CSV Button | DE03 | Button | Displayed if admin has permissions. | Upload CSV |
| C002 | Integrate with SIS Button | N/A | Button | Displayed if SIS integration is enabled for the system. | Integrate with SIS |
|  |  |  |  |  |  |

# **Notifications**

Summarize the Information presented to a user that summarizes an event, issue, decision, or error.

| **Not.ID** | **Notification Name** | **Notification Trigger** | **Notification Details** | **Notification Example** | **Step(s)**  **(In Use Case)** |
| --- | --- | --- | --- | --- | --- |
| NO001 | User Creation Success | After the user account is successfully created. | Displays confirmation of successful user creation. | "User successfully created!" | 12 |
| NO002 | Invalid User Input | When input validation fails. | Highlights fields with errors and provides prompts. | "Please enter a valid email address." | AF01 |
| NO003 | User Already Exists | When attempting to create a user with an existing ID. | Notifies admin that the user already exists. | "User ID already exists." | AF02 |
| NO004 | CSV Validation Error | When there is an issue with the uploaded CSV file. | Displays validation errors for bulk user creation. | "CSV contains invalid data." | AF03 |
| NO005 | Role Assignment Error | When role assignment fails due to invalid input. | Displays an error indicating invalid role assignment. | "Invalid role selected. Please try again." | 8 |

# **Additional Details & Notes**

Please provide any additional details to support this Use Case.