



**Dhirubhai Ambani
University
Technology**

Formerly DA-IICT

IT314 - SOFTWARE ENGINEERING

PROJECT: FLUENTIFY

GROUP - 03

TASK: SYSTEM TESTING

(ADMIN MODULE)

Dhirubhai Ambani Institute of Information and Communication
Technology

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I. ANALYTICS DASHBOARD & PLATFORM ANALYTICS

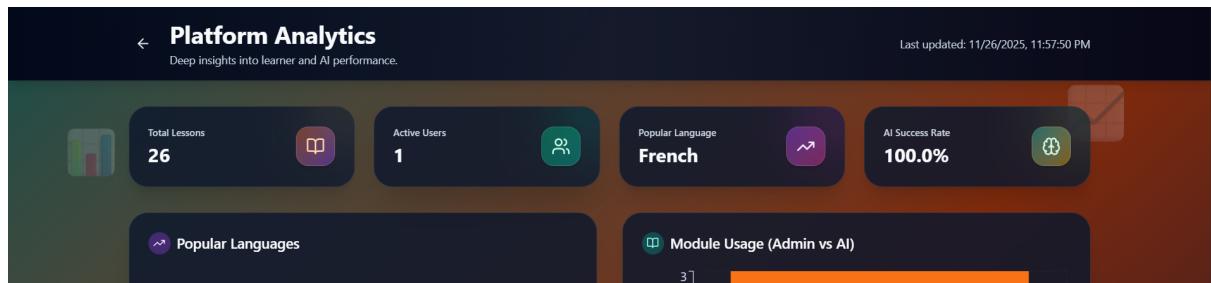
Constraints and Assumptions

- **Empty State:** When there are zero users, all analytics should show empty values.
- **Calculations:** Total number of courses = admin uploaded modules + user-generated modules.
- **Visuals:** Most popular language must correspond to the highest generated-language count.

Blackbox Testing

Boundary Testing — Total Courses

Scenario	Input Data	Expected Output	Actual Output
No users	0 courses	0	0
Multiple users	2 admin courses + 24 user courses	26	26



II. USER MANAGEMENT — VIEW & EDIT ONLY

Constraints

- **View Only:** Admin may only view user data and edit username or email.
- **Email:** Must be a valid format and must be unique.
- **Username:** Cannot be empty; must respect maximum length.
- **Session:** Logout must terminate editing permissions.

Equivalence Class Partitioning

Class	Input / State	Condition	Result
E1 (Valid)	Edit username/email	Valid format	Update Saved
E2 (Valid)	View user data	User exists	Data displayed
E3 (Invalid)	Edit email	Invalid email format	Not updated; remains in edit window
E4 (Invalid)	Edit email	Duplicate email exists	Not updated; remains in edit window
E5 (Invalid)	Edit username	Empty or exceeds max limit	Not updated; remains in edit window
E6 (Error)	Save update	Backend error or time-out	Save fails; error message

Boundary Value Analysis

Scenario	Input Data	Expected Out-put	Actual Out-put	Reason
Min Username Length	0 characters	Save Disabled	Save Disabled	Min Boundary
Valid Username	1 character	Saved Successfully	Saved Successfully	Valid Boundary
Max Username Length	Max allowed 50 characters	Saved Successfully	Saved Successfully	Max Boundary
Overflow Username	Max(50)+1 characters	Save disabled	Save disabled	Exceeds Limit
Valid Email	Proper email format	Saved Successfully	Saved successfully	Valid Case
Invalid Email	“bad email”	Save Disabled	Save Disabled	Invalid Format
Duplicate Email	Existing email in DB	Save disabled	Save disabled	Uniqueness Rule
Network Failure	Save during network drop	Error Message		Error Handling

ACCEPTANCE TESTING

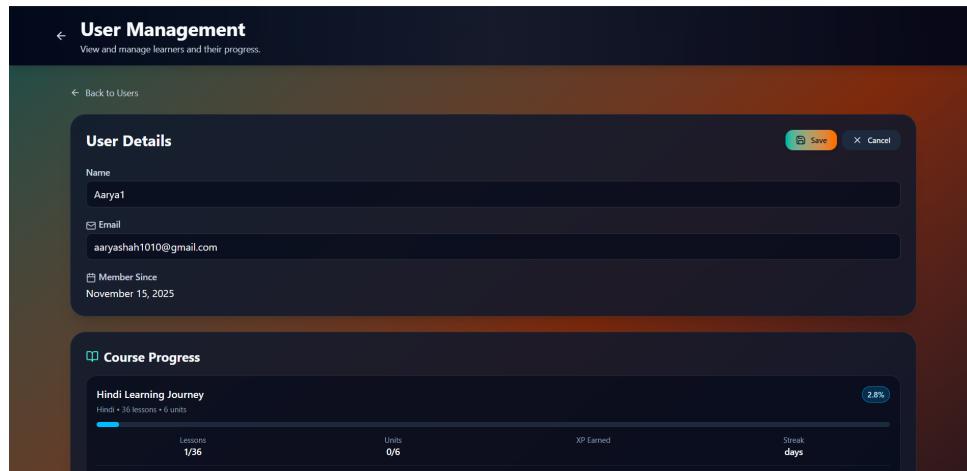
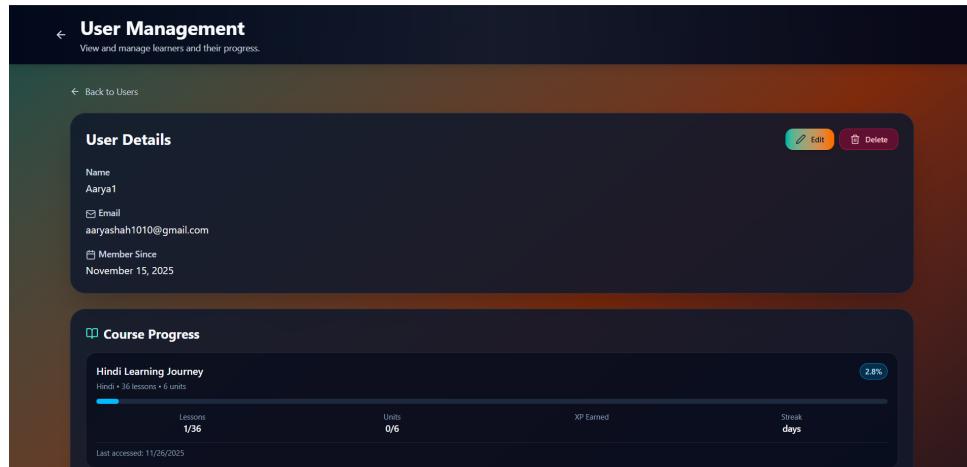


Figure 1: User Management — Edit Dialog (example)

Test ID	Input Data	Expected Result	Actual Result	Status
UM-AT-01	Open User Management page (Admin)	Page loads; user list visible	Page loads; user list visible	Pass
UM-AT-02	Click Edit on a user row (Admin)	Edit dialog opens with username & email prefilled; Save & Cancel visible	Same as expected	Pass
UM-AT-03	Edit username to valid new value & Save	Successful; list shows new username; audit entry present	Same as expected	Pass
UM-AT-04	Edit email to valid, unique email & Save	Successful; list shows new email; audit entry present	Same as expected	Pass

Test ID	Input Data	Expected Result	Actual Result	Status
UM-AT-05	Edit email to invalid format (e.g., 'bad email') & Save	Save disabled	Save disabled, it doesn't change the email	Pass
UM-AT-06	Edit email to an existing email (duplicate) & Save	Save disabled	Save disabled, it doesn't change the email and stays on the same page	Pass
UM-AT-07	Open Edit, do NOT change values, click Save	No-op; no duplicate audit entry	Same as expected	Pass
UM-AT-08	Concurrent edit: Admin A opens edit (value X), Admin B saves Y, Admin A saves Z	Conflict handled per policy; last-write-wins; audit shows both changes	Same as expected	Pass
UM-AT-09	Save large username at max length and Save	Saved if within configured limit; displayed correctly (no overflow)	Same as expected	Pass
UM-AT-10	Keyboard-only: Tab into Edit dialog, change email, press Enter	Saved successfully	Same as expected	Pass

III. MODULE MANAGEMENT

CONSTRAINTS

- **Course Creation:** Admin must enter all required fields (Language, Level, Title). Optional fields include Description, Thumbnail URL, and Estimated Duration.
- **Publish Option:** Course becomes visible to learners only when “Publish this course” is selected.
- **Validation:** All required fields must be non-empty. Invalid or duplicate titles must be rejected.
- **Navigation:** “Create New Course”, “View Details”, and “Manage Courses” must redirect correctly without errors.

BLACKBOX TESTING

1) Equivalence Class Partitioning (Input & State):

Class	Input / State	Condition	Result
E1 (Valid)	Create Course	All required fields valid	Course Saved
E2 (Valid)	Publish Course	Publish toggle ON	Visible to Learners
E3 (Invalid)	Missing Required Fields	Title/Language/Level empty	Save Disabled / Error
E4 (Invalid)	Duplicate Title	Same title + same language	Error Message
E5 (Invalid)	Thumbnail URL	Invalid URL format	Error Message
E6 (Invalid)	Duration	Non-readable duration	Error Message
E7 (Error)	Save Request	Backend failure	Save Fails / Error

2) Boundary Value Analysis (Course Fields):

Scenario	Input Data	Exp. Output	Act. Output	Reason
Min Title Length	0 Characters	Save Disabled/Error message	Same as expected	Min Boundary
Valid Title	1 Character	Saved	Saved successfully	Valid Boundary
Max Title Length	Max allowed (255)	Saved	Saved successfully	Max Boundary
Overflow Title	Max+1 Characters	Save disabled/Error message	Same as expected	Exceeds Limit
Valid URL	Proper http/https URL	Saved	Saved	Valid Case
Invalid URL	“abc”, “123”	Save disabled	Saved nonetheless	Error not yet solved
Valid Duration	“3 months”, “6 weeks”	Saved	Saved successfully	Valid Case
Invalid Duration	“, “unknown-text”	Error Message	Error message	Invalid Format
Publish OFF	Toggle unchecked	Saved as Draft	Saved as Draft	Valid State
Publish ON	Toggle checked	Saved as Published	Saved as Published	Valid State

ACCEPTANCE TESTING

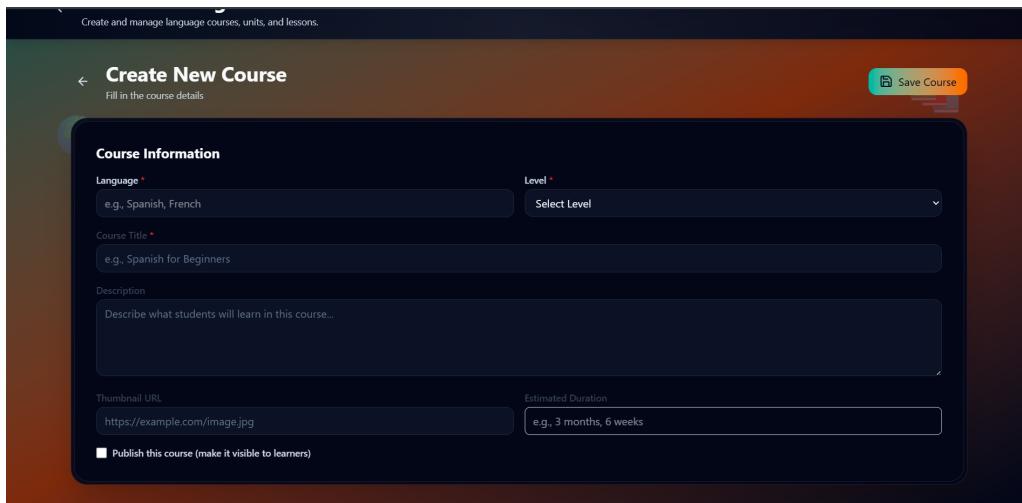


Figure 2: Module Management Interface

Test ID	Input Data	Expected Result	Actual Result	Status
MM-AT-01	Open Module Management page	Page loads; course cards visible	Same as Expected	Pass
MM-AT-02	Click “Create New Course”	Empty creation form appears	Same as expected	Pass
MM-AT-03	Enter valid course details	Course saved; list updated	Saved successfully	Pass
MM-AT-04	Missing required fields	Error	Error message displayed/Not saved	Pass
MM-AT-05	Invalid Thumbnail URL	Error; Not saved	Error message	Pass
MM-AT-06	Publish OFF	Saved as Draft	Saved and not published	Pass
MM-AT-07	Publish ON	Saved as Published	Saved and published on the user side	Pass
MM-AT-08	Invalid Duration	Error shown	Error	Pass
MM-AT-09	Click Manage courses and edit	Course details shown	Course details shown accurately and editable	Pass
MM-AT-10	Max title length	Saved successfully	Saved successfully	Pass
MM-AT-11	Exceed max title length	Save blocked	Not saved and error message shown	Pass
MM-AT-12	Go back while on creation page	No course saved	No course saved	Pass

IV. CONTEST CREATION

CONSTRAINTS

- **Required Fields:** Contest Title, Start Date & Time, End Date & Time. At least one question (with two options) required to publish.
- **Date Constraints:** Start Date must be before End Date; dates must be in valid format and generally future-dated for creation.
- **Questions:** Each question requires question text and at least two options; exactly one option must be marked correct for single-answer MCQ.
- **Save vs Publish:** ‘Create Contest’/‘Save’ Changes stores draft; ‘Publish Contest’ makes contest visible to learners during scheduled time.

- **Validation:** Title cannot be empty or exceed max length (255 chars). Options cannot be empty. Duplicate questions flagged.
- **Navigation:** Back arrow/cancel should not create partial contests.

BLACKBOX TESTING

1) Equivalence Class Partitioning (Input & State):

Class	Input / State	Condition	Result
E1 (Valid)	Create Contest	Title with valid Start and End dates and at least one question containing two or more options with one correct answer selected	Contest created as draft
E2 (Valid)	Publish Contest	Contest saved and schedule valid	Contest becomes Published and visible to learners
E3 (Invalid)	Missing Required Fields	Title missing or Start/End date missing	Save blocked; inline error shown
E4 (Invalid)	Invalid Dates	Start date is greater than or equal to End date, or the date format is invalid	Validation error; save blocked
E5 (Invalid)	Insufficient Options	A question has fewer than two options	Question invalid; save blocked
E6 (Invalid)	No Correct Option	No option is marked as the correct answer	Question invalid; save blocked
E7 (Invalid)	Duplicate Questions	Two or more questions contain identical text	Warning shown or duplicate rejected
E8 (Edge)	Excess Length Title	Title exceeds the maximum allowed length	Title truncated or error shown; save blocked

2) Boundary Value Analysis (Contest Fields):

Scenario	Input Data	Exp. Output	Act. Output	Reason
Min Length Title	0 characters	Not saved, error line	Shows error line "title required" and does not proceed further	Min Boundary
Valid Title	1 character	Saved	Saved as a valid contest	Valid Boundary
Max Length Title	Max allowed (255)	Saved	Saved successfully	Max Boundary
Overflow Title	Max+1 characters	Error / reject save	Error msg pops up	Exceeds Limit
Valid Start/End	Start < End (future)	Saved	Saved	Valid date condition
Start == End	Start == End	Error (invalid range)	Error line displayed	Boundary equality
Start greater than End	Start greater than End	Error	Error line displayed	Invalid date range
Min Questions	1 question with 2 options	Saved	Saved successfully	Min requirement
Less than Min Options	1 option only	Question invalid; save blocked	Error message pops up; save blocked	Option count boundary
Missing Correct Option	No radio selected	Question invalid	Error message pops up; save blocked	Business rule

ACCEPTANCE TESTING

The screenshot displays the 'Contest Details' section and the 'Questions' section of the contest creation form.

Contest Details:

- Contest Title: hgsdfiww (highlighted in red)
- Description (Optional): Brief description of the contest...
- Start Date & Time: 28-11-2025 03:02
- End Date & Time: 29-11-2025 03:02
- Save Changes button

Questions (1):

1. Cypress temporary question?

- A. Option 1 ✓ (highlighted in green)
- B. Option 2

Figure 3: Contest Creation Form

Test ID	Input Data	Expected Result	Actual Result	Status
CT-AT-01	Open Contest Management page	Page loads; contest cards visible; Create Contest button visible	Same as expected	Pass
CT-AT-02	Click "Create Contest"	Contest creation form opens with empty required fields	Contest creation form opens successfully	Pass
CT-AT-03	Save valid contest (Title, valid start and end)	Contest saved as draft	Saved successfully	Pass
CT-AT-04	Missing Title	Save blocked, inline "Title required" error	Inline error shown, save blocked	Pass
CT-AT-05	Start is greater than End	Validation error "End must be after Start"; save blocked	Same as expected	Pass
CT-AT-06	Add question with 1 option only	Add blocked; shows "At least 2 options required"	Same as expected	Pass
CT-AT-07	Add question with no correct option	Save blocked; inline error	Same as expected	Pass
CT-AT-08	Publish valid contest	Contest status = Published; visible to learners in scheduled time	Same as expected	Pass
CT-AT-09	Publish with Start in past	Publish if end in future; or validation error	Published if the end time is in future or else error message	Pass
CT-AT-10	Cancel/back during creation	No contest created	No contest created or the unsaved changes discarded	Pass
CT-AT-11	Title at max length	Save succeeds; title preserved	Same as expected	Pass
CT-AT-12	Title exceeding max length	Error	Error message pops up	Pass
CT-AT-13	Add 5 questions and save	Contest saved with 5 questions; UI lists them	Same as expected	Pass

V. PROFILE PAGE

CONSTRAINTS

- **Editable Fields:** Only the Full Name field is editable.
- **Non-editable Fields:** Email Address, Member Since date, and Email Verification status cannot be edited.
- **Validation:** Full Name must be non-empty, must not exceed the maximum length and must not have invalid characters.
- **Save Behavior:** Changes to Full Name must persist immediately and display consistently across the admin interface.
- **Navigation:** Navigating away without clicking Save must discard any unsaved name changes.

BLACKBOX TESTING

1) Equivalence Class Partitioning (Input & State):

Class	Input / State	Condition	Result
E1 (Valid)	Edit Full Name	Full Name is within limit	Full Name updated successfully
E2 (Valid)	View Profile Page	All details displayed correctly	Profile details visible correctly
E3 (Invalid)	Empty Full Name	Full Name cannot be empty	Save blocked; inline error
E4 (Invalid)	Full Name exceeds maximum length (50 char)	Name too long	Error shown; save blocked
E5 (Invalid)	Full Name contains invalid characters	Special symbols not allowed	Validation error; save blocked
E6 (Invalid)	Attempt to edit Email or Member Since fields	Fields are locked and non-editable	Input disabled
E7 (Valid Navigation)	Navigate away without saving	Leave page without clicking Save	No changes saved

2) Boundary Value Analysis (Full Name Field):

Scenario	Input Data	Exp. Output	Act. Output	Reason
Min Length	0 characters	Save blocked; in-line error	Inline error; save blocked	Min Boundary
Valid Min	2 character	Save successful	Save successful	Valid Boundary
Max Length	50 characters	Save successful	Save successful	Max Boundary
Overflow	maximum + 1 character	Save blocked; error shown	Save blocked; in-line error	Exceeds Limit
Invalid Characters	@#123* etc.	Error shown	inline error	Input validation
Normal Name	Yug Patel	Save successful	Save successful	Typical Valid Case
Unsaved Navigation	Navigate away after change	No changes saved	No changes made	Data consistency

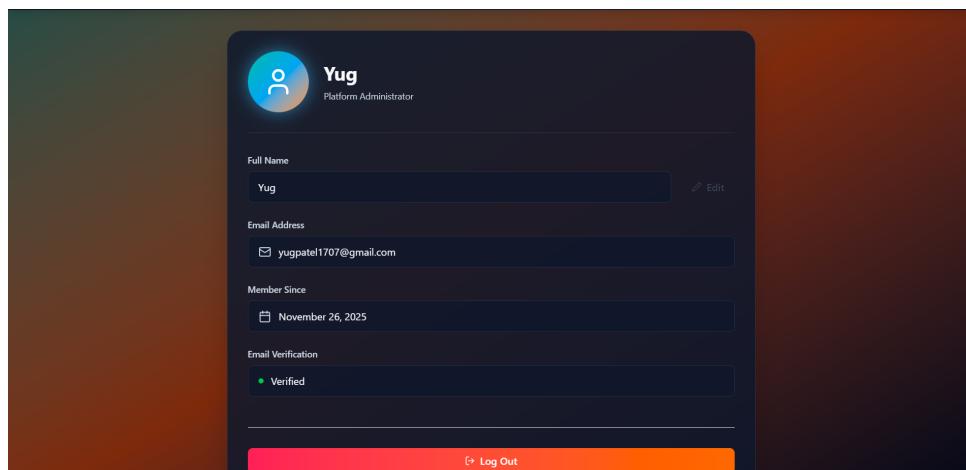


Figure 4: Admin profile page

ACCEPTANCE TESTING

Test ID	Input Data	Expected Result	Actual Result	Status
PF-AT-01	Open Profile Page	Full Name, Email, Member Since, Verification visible	Same as expected	Pass
PF-AT-02	Edit Full Name with valid value	Name updated and persists after refresh	Same as expected	Pass

Test ID	Input Data	Expected Result	Actual Result	Status
PF-AT-03	Save with empty Full Name	Inline error; save blocked	Same as expected	Pass
PF-AT-04	Full Name exceeding maximum length (50)	Error; save blocked	Inline error; save blocked	Pass
PF-AT-05	Invalid characters in Full Name	Error shown; cannot save	Inline error; save blocked	Pass
PF-AT-06	Attempt to edit Email or Member Since	Fields locked; no edit possible	Input disabled	Pass
PF-AT-07	Navigate away without saving	No changes saved	Same as expected	Pass
PF-AT-08	Refresh after save	Updated name persists after page reload	Updates persist	Pass