Software Engineering: Project

e-Val: An Online Exam and Quiz Management System

Development Methodology - Sprint 1

EST. 2025

PROCRAFTERS

Stop thinking. Start working.

Team Name: Procrafters

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Module to be developed: User Access (+ Pre-requisites)

Selected User Stories:

Authentication -

As a: User,
I want to: create an account and log in
so that I can: access my dashboard.

Sub-user stories:

As a: Student,
I want to: register an account
so that I can: access quizzes.

Acceptance Criteria: The student registers their account and is redirected to their dashboard.

As a: Teacher,
I want to: register an account
so that I can: create and manage quizzes.

Acceptance Criteria: The teacher register their account and is redirected to their dashboard.

As a: User,
I want to: reset my password
so that I can: regain access if I forget it.

Acceptance Criteria: The user is allowed to chose a new password and the password is updated in the database.

As a: User,
I want to: the system to verify my email upon registration
So I can: to ensure security.

Acceptance Criteria: The code sent for verification is verified with the one entered by user adn the email is linked to the registered account.

As a: User,
I want to: be able to log in
So that I can: access my registered account.

Acceptance Criteria: Users credentials are authenticated and they are redirected to their corresponding dashboard.

Classes Enrollment -

As a: Student,
I want to: enroll in an available class
So that I can: take exams by either opting for it or getting an invitation from a teacher.

Acceptance Criteria: Students can browse and request to join classes, while teachers receive notifications and can manually manage enrollments. Once enrolled, students gain access to quizzes and course materials.

Structured Specifications:

1. Student Registration

Input: Student enters name, email, password, and other required details.

Process: System checks if email is unique. Passwords are hashed and stored in the database. Student account is created, and a confirmation is displayed.

Output: If successful, redirect to the student dashboard. If email exists, display an error message.

Exceptions: If mandatory fields are missing, prompt the user to complete them.

2. Teacher Registration

Input: Teacher enters name, email, password, and other required details.

Process: System verifies if email is unique. Passwords are securely stored, and an account is created.

Output: If successful, redirect to the teacher dashboard. If email exists, show an error message.

Exceptions: If required fields are missing, prompt the user.

3. Password Reset

Input: User enters email to request a password reset. User provides a new password via reset link.

Process: System verifies email existence. Generates and sends a reset link. User sets a new password, which is hashed and updated.

Output: Success message upon password update. Error if email is unregistered.

Exceptions: If the reset link is expired or invalid, notify the user. If passwords do not match, prompt for re-entry.

4. Email Verification

Input: User provides an email during registration.

Process: System generates and emails a verification code/link. User enters the code or clicks the link. System validates the code and marks the email as verified.

Output: Confirmation message on success. Error message if verification fails.

Exceptions: Allow users to request a new code if needed.

5. Login Authentication

Input: User enters email and password.

Process: System validates credentials. If correct, retrieve the user role and redirect accordingly.

Output: Successful login redirects to the user dashboard. Failure prompts an "Invalid credentials" message.

Exceptions: Lockout after multiple failed attempts. Prevent login for unverified users.

6. Class Enrollment

Input: Student selects a class or accepts an invitation.

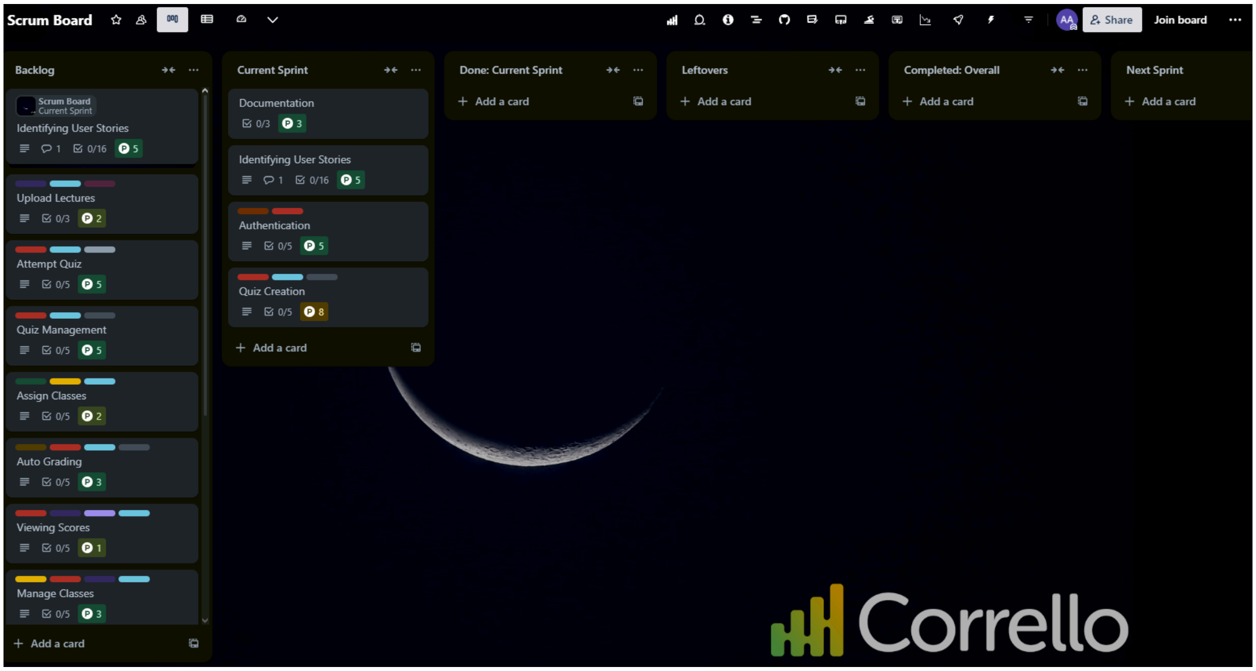
Process: System checks enrollment status. Updates student-class association in the database.

Output: Confirmation message on successful enrollment. Error if enrollment fails.

Exceptions: If class is full, deny enrollment and notify the student. Prevent duplicate enrollments.

SCRUM Board Updates:

Initial Board:



Backlog

- Scrum Board / Current Sprint — Identifying User Stories — 1 — 0/16 — 5
- Upload Lectures — 0/3 — 2
- Attempt Quiz — 0/5 — 5
- Quiz Management — 0/5 — 5
- Assign Classes — 0/5 — 2
- Auto Grading — 0/5 — 3
- Viewing Scores — 0/5 — 1
- Manage Classes — 0/5 — 3
- + Add a card

Current Sprint

- Documentation — 0/3 — 3
- Identifying User Stories — 1 — 0/16 — 5
- Authentication — 0/5 — 5
- Quiz Creation — 0/5 — 8
- + Add a card

Done: Current Sprint

- + Add a card

Leftovers

- + Add a card

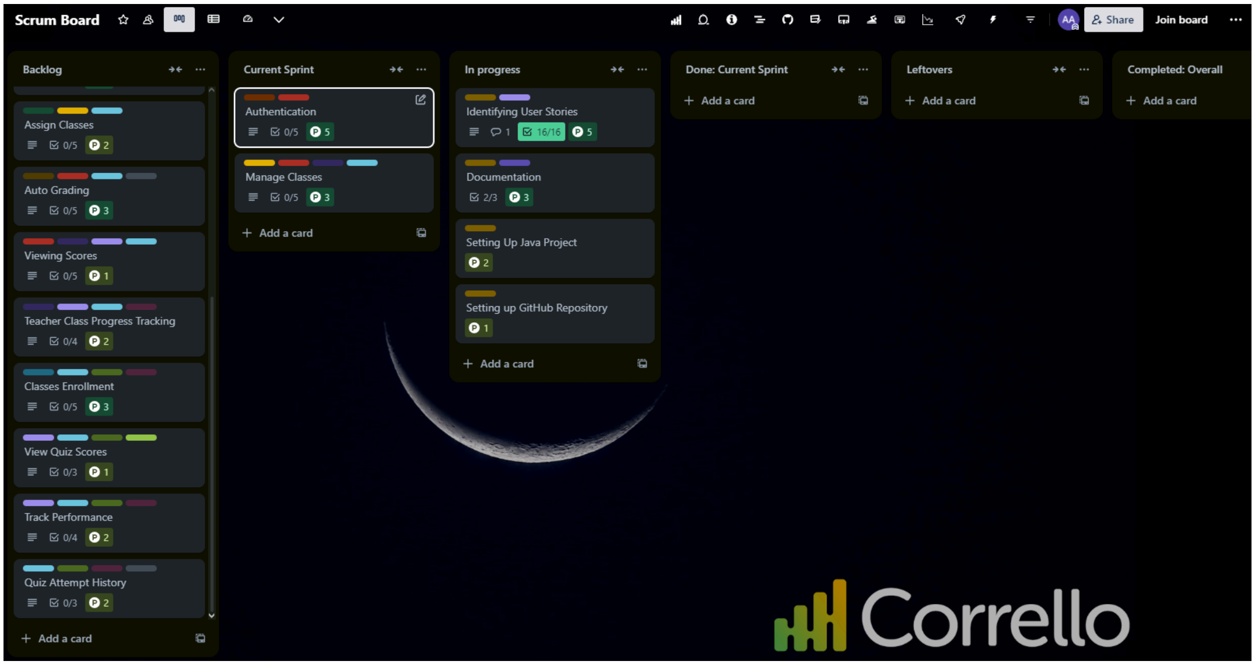
Completed: Overall

- + Add a card

Next Sprint

- + Add a card

In progress Board:



Backlog

- Assign Classes — 0/5 — 2
- Auto Grading — 0/5 — 3
- Viewing Scores — 0/5 — 1
- Teacher Class Progress Tracking — 0/4 — 2
- Classes Enrollment — 0/5 — 3
- View Quiz Scores — 0/3 — 1
- Track Performance — 0/4 — 2
- Quiz Attempt History — 0/3 — 2
- + Add a card

Current Sprint

- Authentication — 0/5 — 5
- Manage Classes — 0/5 — 3
- + Add a card

In progress

- Identifying User Stories — 1 — 16/16 — 5
- Documentation — 2/3 — 3
- Setting Up Java Project — 2
- Setting up GitHub Repository — 1
- + Add a card

Done: Current Sprint

- + Add a card

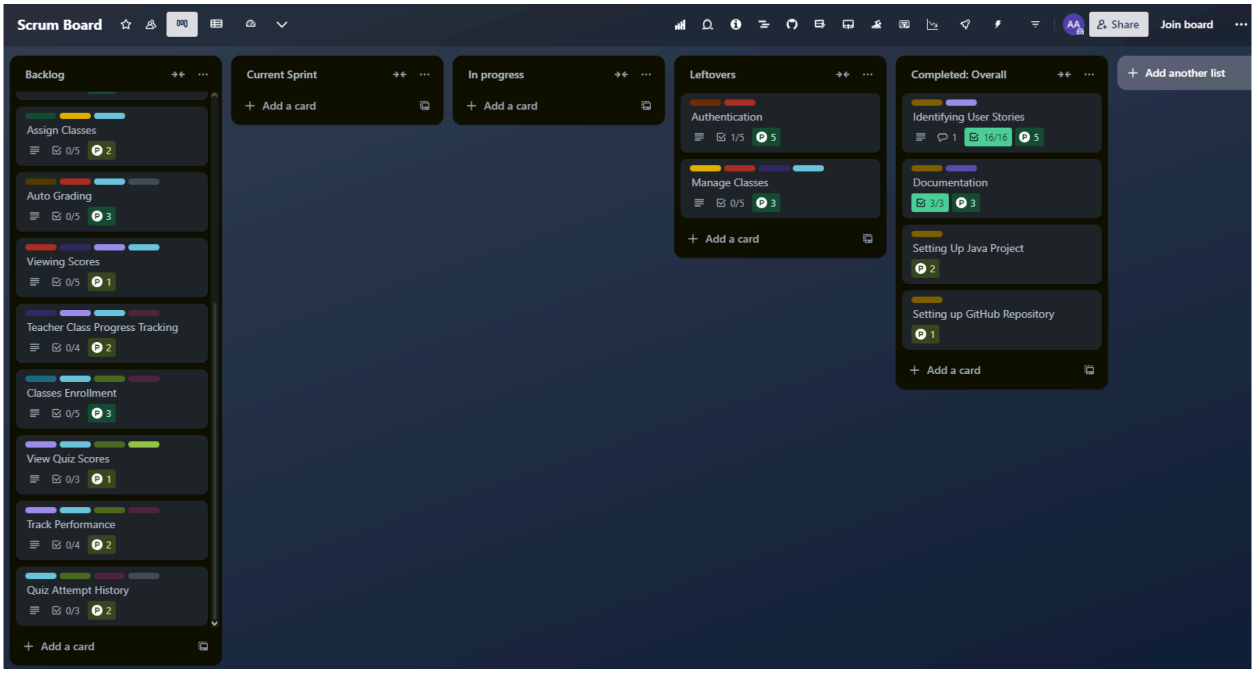
Leftovers

- + Add a card

Completed: Overall

- + Add a card

Ending Board:



Scrum Board

Share

Join board

Backlog

Assign Classes
0/5 P 2

Auto Grading
0/5 P 3

Viewing Scores
0/5 P 1

Teacher Class Progress Tracking
0/4 P 2

Classes Enrollment
0/5 P 3

View Quiz Scores
0/3 P 1

Track Performance
0/4 P 2

Quiz Attempt History
0/3 P 2

+ Add a card

Current Sprint

+ Add a card

In progress

+ Add a card

Leftovers

Authentication
1/5 P 5

Manage Classes
0/5 P 3

+ Add a card

Completed: Overall

Identifying User Stories
1 16/16 P 5

Documentation
3/3 P 3

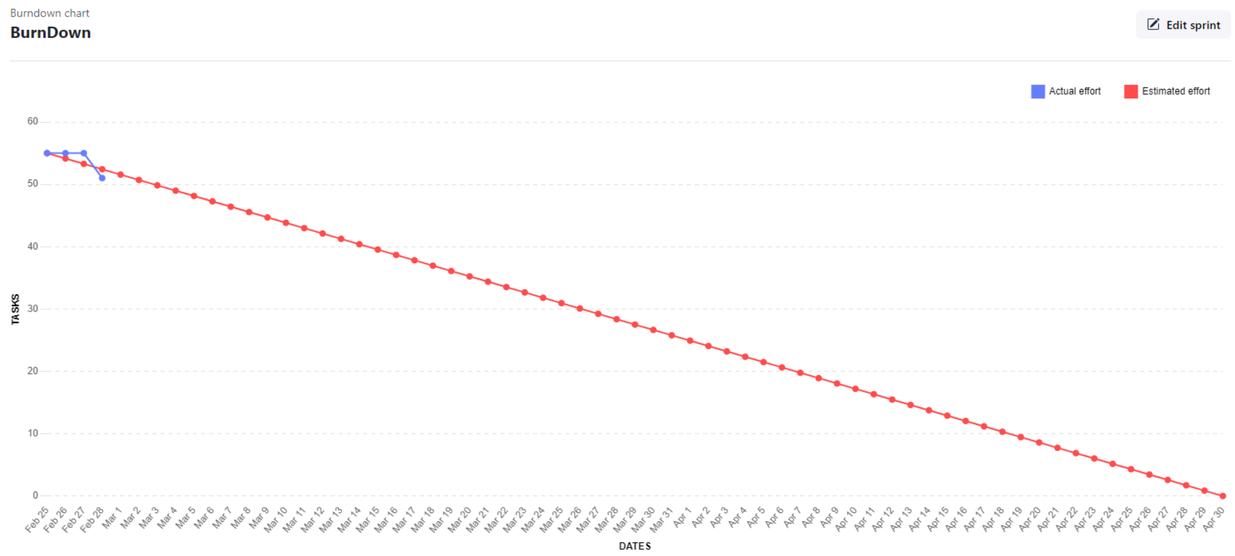
Setting Up Java Project
P 2

Setting up GitHub Repository
P 1

+ Add a card

+ Add another list

Burndown Chart:


Burndown chart
BurnDown
Edit sprint
Actual effort
Estimated effort
TASKS
Feb 25
Feb 26
Feb 27
Feb 28
Mar 1
Mar 2
Mar 3
Mar 4
Mar 5
Mar 6
Mar 7
Mar 8
Mar 9
Mar 10
Mar 11
Mar 12
Mar 13
Mar 14
Mar 15
Mar 16
Mar 17
Mar 18
Mar 19
Mar 20
Mar 21
Mar 22
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Mar 24
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Mar 26
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Mar 28
Mar 29
Mar 30
Mar 31
Apr 1
Apr 2
Apr 3
Apr 4
Apr 5
Apr 6
Apr 7
Apr 8
Apr 9
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Apr 25
Apr 26
Apr 27
Apr 28
Apr 29
Apr 30
DATES