🧪 Practice Lab: Azure Boards with Agile Scrum

🎯 Objective

By the end of this lab, learners will:

- Understand how to structure work items in Azure Boards.
- Practice creating Epics, Features, PBIs, Tasks, and Bugs.
- Learn how to use Backlogs, Boards, and Sprints.
- Manage sprint planning, daily stand-ups, and tracking progress.

Step 1: Setup Azure Boards Project

1. Log in to Azure DevOps.
2. Click **New Project** → Name it `E-Commerce Web App` → Select **Scrum process**.
    - Reason: Scrum provides Epics → Features → PBIs → Tasks hierarchy.
3. Ensure `Version Control: Git` and `Work Item Process: Scrum` are selected.

✅ **Use Case**: Your team is building an **E-Commerce Application** with user authentication, product catalog, cart, and order management.

Step 2: Create Epics

1. Go to **Boards → Backlogs → Epics**.
2. Create these Epics:
    - **User Authentication & Security**
    - **Product Catalog**
    - **Shopping Cart & Checkout**
    - **Order Management**

✅ **Use Case Mapping**: Each Epic represents a **major business capability**.

Step 3: Create Features under Epics

1. Under **User Authentication & Security**, create Features:
    - `User Registration`

    - `User Login`
    - `Role-Based Access Control`
2. Under **Product Catalog**:
    - `Product Search`
    - `Product Details Page`

✅ **Use Case Mapping**: Features are **deliverables** contributing to the Epic.

Step 4: Create Product Backlog Items (PBIs)

1. For **User Registration Feature**, create PBIs:
    - `As a user, I should be able to register with email/password.`
    - `As a user, I should receive a confirmation email after registration.`
    - `As a user, I should be able to reset my password.`
2. For **Product Search Feature**, PBIs:
    - `As a user, I want to search products by name.`
    - `As a user, I want to filter products by category.`

✅ **Use Case Mapping**: PBIs are **user stories** written in *As a <role>, I want <function>, so that <benefit>* format.

Step 5: Break PBIs into Tasks

1. For PBI: `User should be able to register with email/password`, create tasks:
    - `Design Registration Page UI`
    - `Implement Backend API for Registration`
    - `Integrate Frontend with API`
    - `Write Unit Tests for Registration`
2. For PBI: `User should be able to reset password`, tasks:
    - `Design Forgot Password Page`
    - `Implement Email Sending Service`
    - `Verify Reset Token Functionality`

✅ **Use Case Mapping**: Tasks are **technical work items** developers execute.

Step 6: Sprint Planning

1. Go to **Boards → Sprints → New Sprint**.
2. Create Sprint 1 (Duration: 2 weeks).
3. Move PBIs (`User Registration`, `User Login`, `Product Search`) into Sprint 1.
4. Ensure each Task is **assigned to a team member** with an **estimate (hours)**.

✅ **Use Case Mapping**: Sprint Planning ensures **commitment for iteration**.

Step 7: Daily Stand-up Using Board

1. Go to **Boards → Board View (Kanban)**.
2. Columns: **To Do → In Progress → Done**.
3. During stand-up, each member updates their task status.
    - Example: "I worked on Registration API yesterday, today I'll write unit tests, no blockers."

✅ **Use Case Mapping**: Tasks move across the board as work progresses.

Step 8: Bug Tracking

1. Create a Bug work item:
    - Title: `Login button not redirecting to dashboard.`
    - Link it to PBI: `As a user, I should be able to log in.`
    - Assign to developer → Move into Sprint.

✅ **Use Case Mapping**: Bugs represent **defects** found during testing.

Step 9: Sprint Review & Retrospective

1. At the end of Sprint:
    - Demonstrate completed PBIs to Product Owner.
    - Update **Remaining Work** in Sprint Burndown Chart.
2. Retrospective:
    - "What went well?"
    - "What can be improved?"
    - "Action items for next sprint?"

✅ **Use Case Mapping**: Scrum ceremonies ensure **continuous improvement**.

Step 10: Reporting & Dashboards

1. Go to **Boards → Analytics → Burndown Chart**.
2. Track Sprint progress (remaining work vs. time).
3. Create a Dashboard widget showing:
    - Velocity chart
    - Cumulative Flow diagram
    - Work Item Trend

✅ **Use Case Mapping**: Helps stakeholders **visualize progress**.

📝 Lab Summary

In this lab, learners:

✔ Created a Scrum project in Azure Boards.
✔ Structured work with Epics → Features → PBIs → Tasks.
✔ Planned a Sprint with realistic backlog items.
✔ Used Board view for daily updates.
✔ Tracked progress with Burndown charts & dashboards.