AZURE DEVOPS ASSESSMENT-1
BANKING APPLICATION

PART 1 - Work Item Breakdown:

Work items

Recently updated ∨ | + New Work Item ∨ ⟳ Open in Queries ✎ Column Options ⬆ Import Work Items 🗑 Recycle Bin

Filter by keyword

Types ∨   Assigned to ∨   States ∨   Area ∨   Tags ∨   ✕

ID	Title	Assigned To	State	Area Path
		Unassigned	New	Banking-app
117	Transfer Between Own Accounts	Unassigned	New	Banking-app
116	Upload Profile Picture	Unassigned	New	Banking-app
115	Update Contact Information	Unassigned	New	Banking-app
114	Display Multiple Account Balances	Unassigned	New	Banking-app
113	View Savings Account Balance	Unassigned	New	Banking-app
112	Enforce Strong Passwords	Unassigned	New	Banking-app
111	Reset Forgotten Password via Email	Unassigned	New	Banking-app
110	Automatic Logout after Inactivity	Unassigned	New	Banking-app
109	Login with Email & Password	Unassigned	New	Banking-app

Work items

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Filter by keyword

Types ∨   Assigned to ∨   States ∨   Area ∨   Tags ∨   ✕

ID	Title	Assigned To	State	Area Path
126	Resend OTP Option	Unassigned	New	Banking-app
125	Enable OTP Verification for Login	Unassigned	New	Banking-app
124	Email Statement Copies	Unassigned	New	Banking-app
123	Download Monthly Statements in PDF	Unassigned	New	Banking-app
122	Search Transaction History by Date	Unassigned	New	Banking-app
121	View Last 10 Transactions	Unassigned	New	Banking-app
120	Transfer Funds to Beneficiary	Unassigned	New	Banking-app
119	Add Beneficiary for Third-Party Transfer	Unassigned	New	Banking-app
118	Get Transfer Confirmation	Unassigned	New	Banking-app
117	Transfer Between Own Accounts	Unassigned	New	Banking-app

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Filter by keyword

Types ∨   Assigned to ∨   States ∨   Area ∨   Tags ∨   ✕

ID	Title	Assigned To	State	Area Path
135	Design Login Page	Unassigned	New	Banking-app
154	Update User Status in DB	Unassigned	New	Banking-app
133	Implement Approval/Reject Option	Unassigned	New	Banking-app
132	Create Admin Dashboard	Unassigned	New	Banking-app
131	Store User Details in Database	Unassigned	New	Banking-app
130	Develop Registration API (Backend)	Unassigned	New	Banking-app
129	Design Registration Form (Frontend)	Unassigned	New	Banking-app
128	Secure Fund Transfer Data	Unassigned	New	Banking-app
127	Encrypt User Passwords	Unassigned	New	Banking-app

Work items

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≡ Filter by keyword | Types ∨ | Assigned to ∨ | States ∨ | Area ∨ | Tags ∨ | ✕

ID	Title	Assigned To	State	Area Path
145	Implement Frontend Validation	Unassigned	New	Banking-app
144	Define Password Policy	Unassigned	New	Banking-app
143	Validate Token & Reset Password	Unassigned	New	Banking-app
142	Send Reset Link via Email	Unassigned	New	Banking-app
141	Design Password Reset Page	Unassigned	New	Banking-app
140	Session Cleanup	Unassigned	New	Banking-app
139	Implement Auto Logout	Unassigned	New	Banking-app
138	Set Inactivity Timer	Unassigned	New	Banking-app
137	Session Management	Unassigned	New	Banking-app
136	Develop Authentication API	Unassigned	New	Banking-app

Work items

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≡ Filter by keyword | Types ∨ | Assigned to ∨ | States ∨ | Area ∨ | Tags ∨ | ✕

ID	Title	Assigned To	State	Area Path
154	Store Picture in Cloud/DB	Unassigned	New	Banking-app
153	Design Picture Upload Option	Unassigned	New	Banking-app
152	Add Sorting & Filtering	Unassigned	New	Banking-app
151	Modify Backend Query	Unassigned	New	Banking-app
150	Update Dashboard UI	Unassigned	New	Banking-app
149	Integrate API with UI	Unassigned	New	Banking-app
148	Develop Balance API	Unassigned	New	Banking-app
147	Design Balance Dashboard	Unassigned	New	Banking-app
146	Backend Password Checks	Unassigned	New	Banking-app
145	Implement Frontend Validation	Unassigned	New	Banking-app

Work items

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≡ Filter by keyword | Types ∨ | Assigned to ∨ | States ∨ | Area ∨ | Tags ∨ | ✕

ID	Title	Assigned To	State	Area Path
163	Develop Third-Party Transfer API	Unassigned	New	Banking-app
162	Design Payment Form	Unassigned	New	Banking-app
161	Store Beneficiary Data	Unassigned	New	Banking-app
160	Validate Beneficiary Details	Unassigned	New	Banking-app
159	Design Beneficiary Form	Unassigned	New	Banking-app
158	Store Transaction Logs	Unassigned	New	Banking-app
157	Send Email/SMS Notification	Unassigned	New	Banking-app
156	Generate Confirmation Receipt	Unassigned	New	Banking-app
155	Resize & Optimize Image	Unassigned	New	Banking-app
154	Store Picture in Cloud/DB	Unassigned	New	Banking-app

Screenshot 1

Banking-app

- Overview
- Boards
- Work items
- Boards
- Backlogs
- Sprints
- Queries
- Delivery Plans
- Analytics views
- Repos
- Pipelines
- Project settings

Work items

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Filter by keyword | Types ∨ Assigned to ∨ States ∨ Area ∨ Tags ∨ ✕

ID	Title	Assigned To	State	Area Path
163	Develop Third-Party Transfer API	Unassigned	New	Banking-app
162	Design Payment Form	Unassigned	New	Banking-app
161	Store Beneficiary Data	Unassigned	New	Banking-app
160	Validate Beneficiary Details	Unassigned	New	Banking-app
159	Design Beneficiary Form	Unassigned	New	Banking-app
158	Store Transaction Logs	Unassigned	New	Banking-app
157	Send Email/SMS Notification	Unassigned	New	Banking-app
156	Generate Confirmation Receipt	Unassigned	New	Banking-app
155	Resize & Optimize Image	Unassigned	New	Banking-app
154	Store Picture in CloudDB	Unassigned	New	Banking-app

Screenshot 2

Banking-app

- Overview
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Work items

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Filter by keyword | Types ∨ Assigned to ∨ States ∨ Area ∨ Tags ∨ ✕

ID	Title	Assigned To	State	Area Path
173	Optimize Data Retrieval	Unassigned	New	Banking-app
172	Add Download Button	Unassigned	New	Banking-app
171	Generate PDF Statements	Unassigned	New	Banking-app
170	Add Export Option	Unassigned	New	Banking-app
169	Enhance API with Date Parameters	Unassigned	New	Banking-app
168	Add Date Filters in UI	Unassigned	New	Banking-app
167	Sort by Date	Unassigned	New	Banking-app
166	Create Transaction API	Unassigned	New	Banking-app
165	Design Transaction Table	Unassigned	New	Banking-app
164	Integrate Payment Gateway	Unassigned	New	Banking-app

Screenshot 3

Banking-app

- Overview
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Work items

Recently updated ∨ | + New Work Item ∨ | Open in Queries | Column Options | Import Work Items | Recycle Bin

Filter by keyword | Types ∨ Assigned to ∨ States ∨ Area ∨ Tags ∨ ✕

ID	Title	Assigned To	State	Area Path
183	Implement AES-256 Encryption	Unassigned	New	Banking-app
182	Generate New OTPs Dynamically	Unassigned	New	Banking-app
181	Set Rate Limits	Unassigned	New	Banking-app
180	Add Resend Button in UI	Unassigned	New	Banking-app
179	Implement OTP Validation API	Unassigned	New	Banking-app
178	Send OTP via Email/SMS	Unassigned	New	Banking-app
177	Generate OTP Securely	Unassigned	New	Banking-app
176	Store Email Logs	Unassigned	New	Banking-app
175	Attach PDF to Email	Unassigned	New	Banking-app
174	Develop Email Notification Service	Unassigned	New	Banking-app
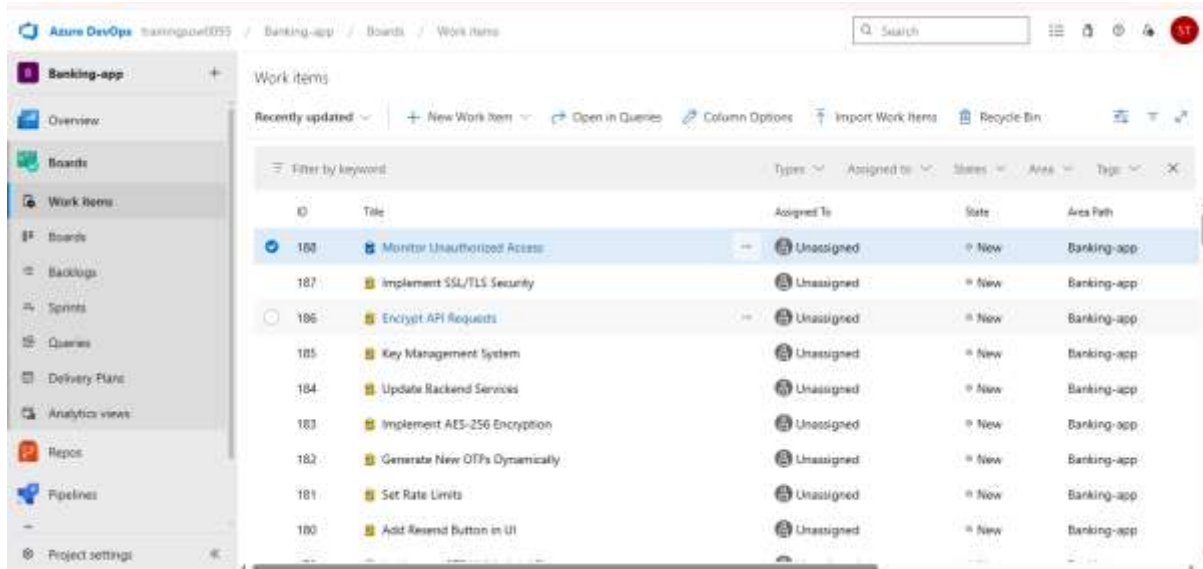
PART 2 - Azure DevOps Git Setup:
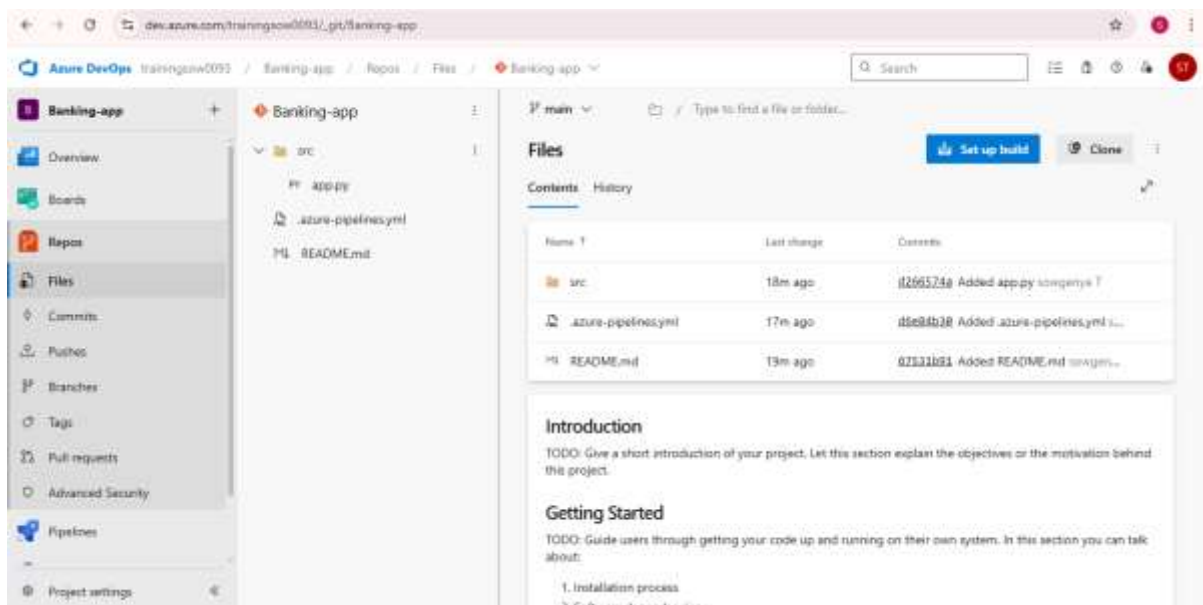
PART 3 - Configure CI/CD Pipeline

1. What is a CI/CD Pipeline?

A **CI/CD pipeline** (Continuous Integration & Continuous Delivery/Deployment) is an **automated process** in **Azure DevOps** that helps us:

- **Build**, **test**, and **deploy** code automatically

- Ensure every code change is verified

- Speed up the development and delivery process

For this **Banking Application** project, we'll configure a **simple pipeline** to **run our Python application (app.py)** whenever we push changes to the repository.

2. Objective

- To **automate** the process of running our project code

- To ensure **successful builds** before deployment

- To practice **CI/CD pipeline configuration** in **Azure DevOps**

3. Steps to Configure CI/CD Pipeline in Azure DevOps

Step 1 — Go to Pipelines

- Navigate to **Azure DevOps** → Select your **Banking-App** project.

- From the left menu, click on **Pipelines** → **Create Pipeline**.

Step 2 — Connect to Your Git Repository

- Choose **Azure Repos Git** as the source.

- Select the repository: **banking-app**.

- Azure DevOps will detect the files from your repository.

Step 3 — Configure the Pipeline using YAML

We'll configure a simple YAML pipeline to **run our app.py file**.

Sample .azure-pipelines.yml File:

trigger:

- main

pool:

  vmImage: 'ubuntu-latest'

steps:

- task: UsePythonVersion@0

  inputs:

    versionSpec: '3.x'

- script: python src/app.py

  displayName: 'Run Banking Application Placeholder'

Step 4 — Save & Run the Pipeline

- Commit the .azure-pipelines.yml file to your repository.
- Click **Save and Run** in Azure DevOps.
- The pipeline will execute automatically.

Step 5 — Verify the Pipeline

- Go to **Pipelines** → Select your pipeline.
- Check the status:
  - **Green Tick** → Successful pipeline execution
  - **Red Cross** → Errors in the build or run

4. Explanation of YAML Pipeline Code

Section	Purpose
trigger	Specifies which branch triggers the pipeline (here, main).
pool	Defines the virtual machine image where the pipeline runs (ubuntu-latest).
steps	Lists the actions the pipeline performs.
UsePythonVersion@0	Ensures Python 3.x is installed in the environment.
script	Executes the Python file (src/app.py).
displayName	A label shown in the pipeline logs.

5. Outcome

- Once configured successfully, every time we **push code** to the **main** branch, Azure DevOps:

    1. **Fetches the latest code**

    2. **Runs the Python application**

    3. Confirms **successful execution**

This ensures the project is **automatically tested and verified** before deployment.