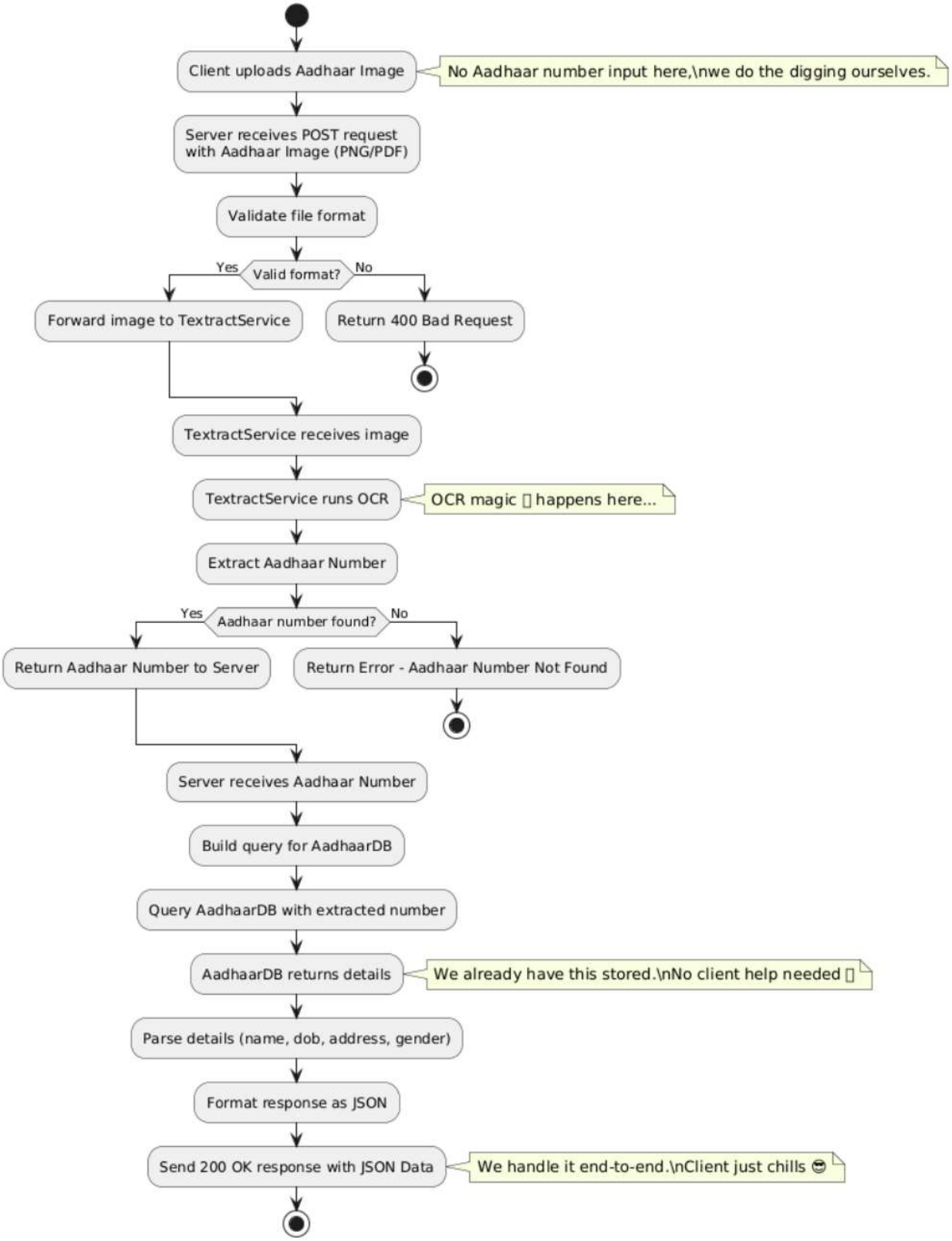
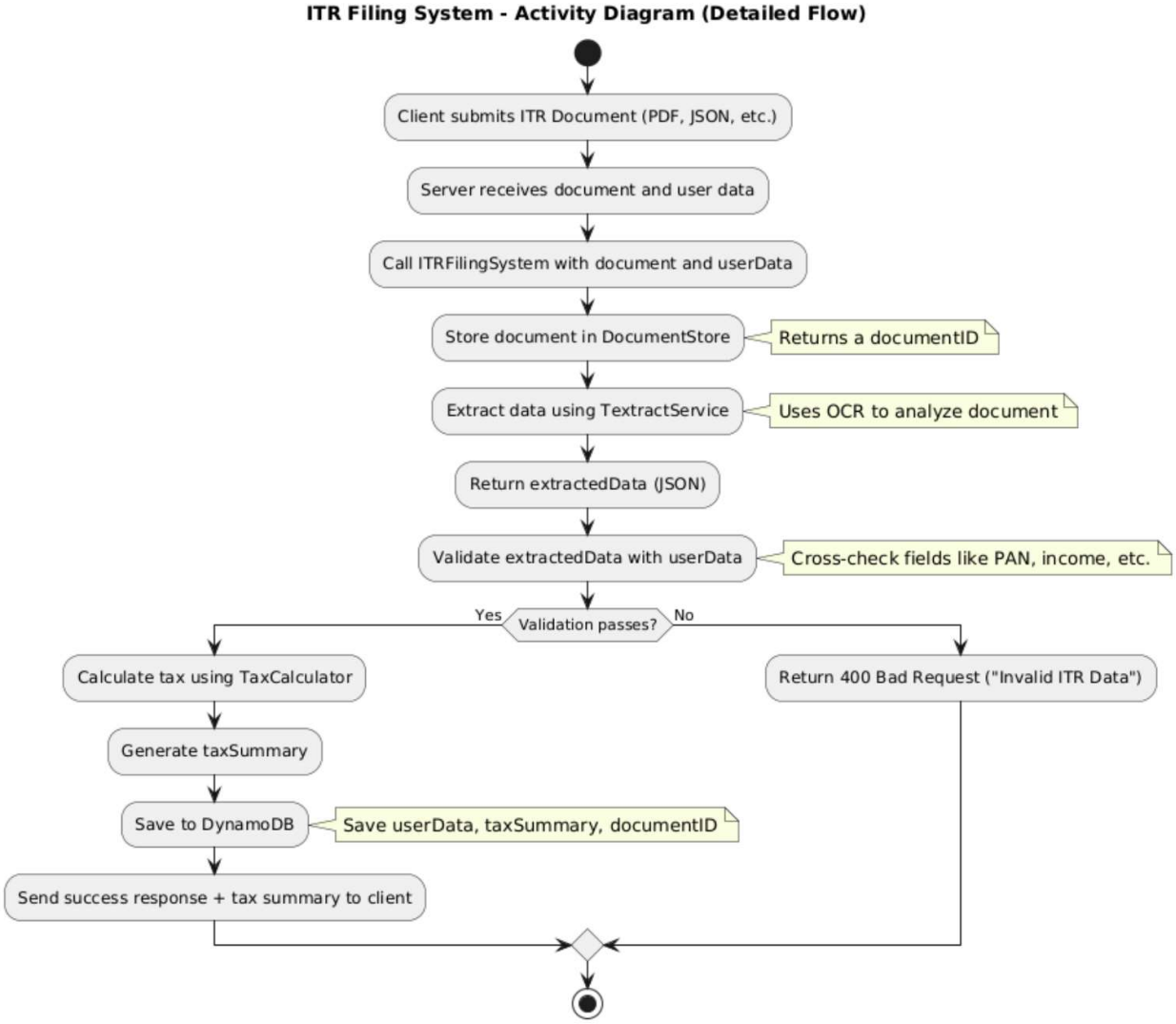
Aadhaar Image Processing - Detailed Activity Diagram




ITR Filing System - Activity Diagram (Detailed Flow)
Client submits ITR Document (PDF, JSON, etc.)
Server receives document and user data
Call ITRFilingSystem with document and userData
Store document in DocumentStore
Returns a documentID
Extract data using TextractService
Uses OCR to analyze document
Return extractedData (JSON)
Validate extractedData with userData
Cross-check fields like PAN, income, etc.
Yes
Validation passes?
No
Calculate tax using TaxCalculator
Return 400 Bad Request ("Invalid ITR Data")
Generate taxSummary
Save to DynamoDB
Save userData, taxSummary, documentID
Send success response + tax summary to client

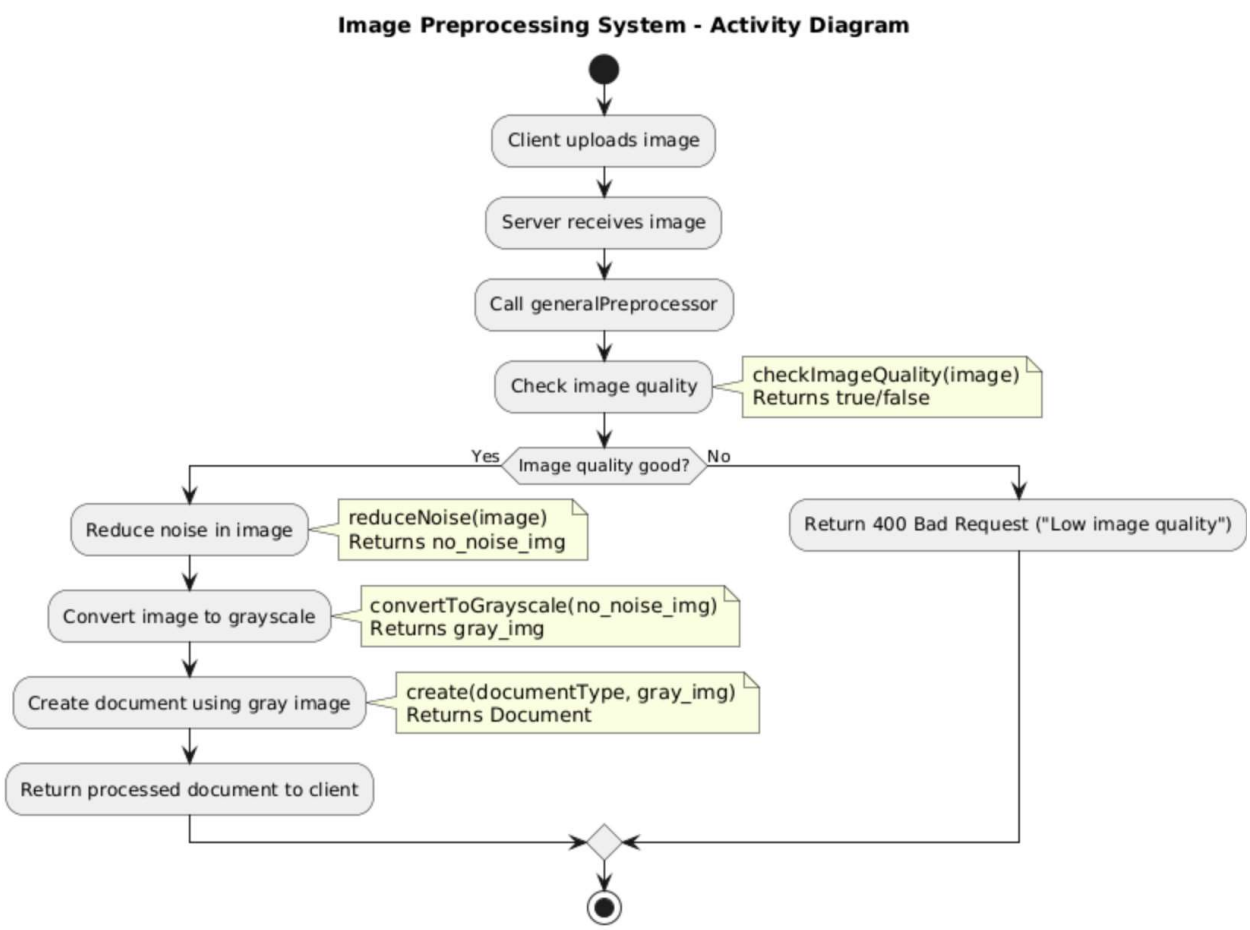
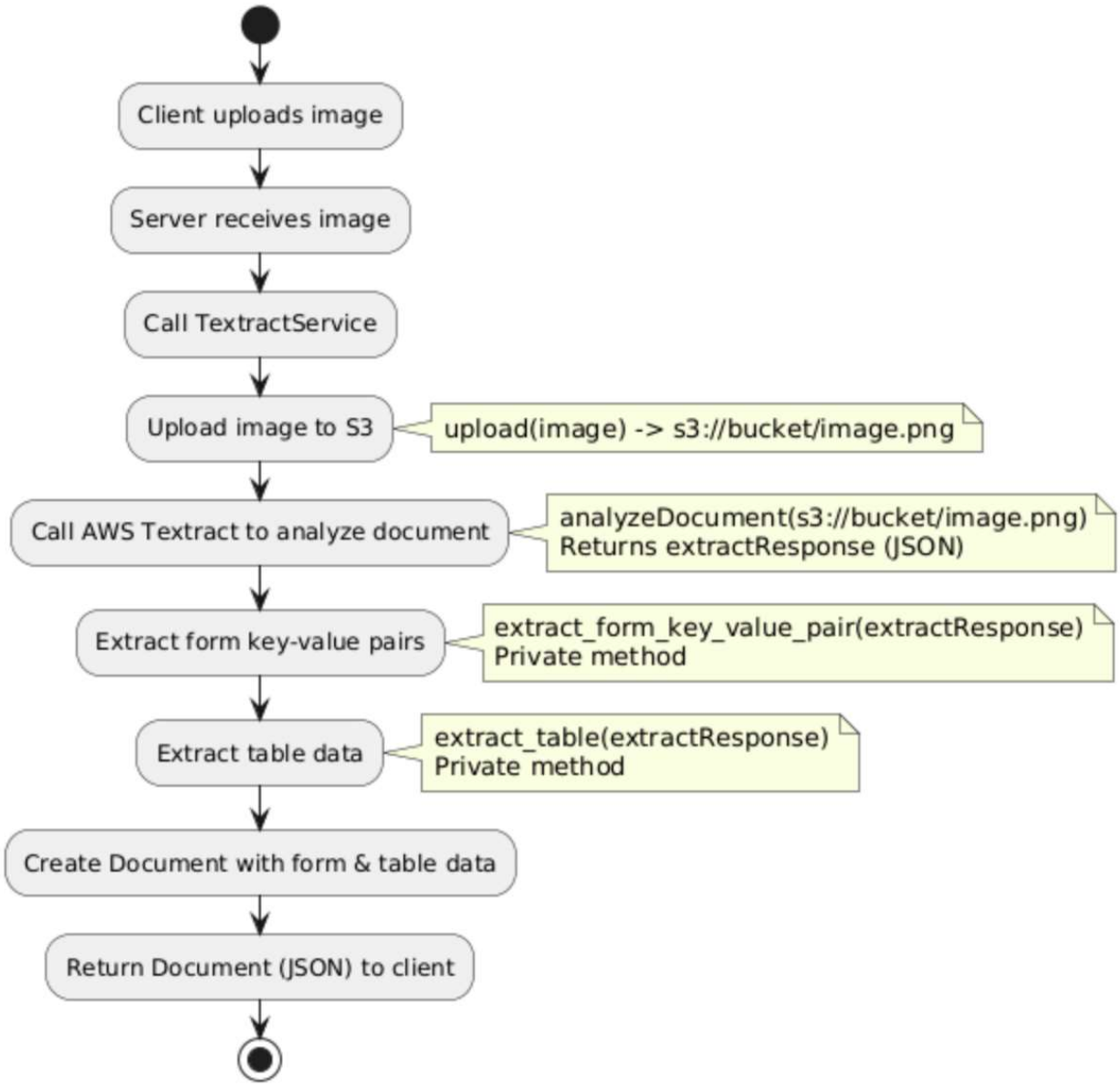


Image Preprocessing System - Activity Diagram
Client uploads image
Server receives image
Call generalPreprocessor
Check image quality
checkImageQuality(image)
Returns true/false
Image quality good?
Yes
No
Reduce noise in image
reduceNoise(image)
Returns no_noise_img
Convert image to grayscale
convertToGrayscale(no_noise_img)
Returns gray_img
Create document using gray image
create(documentType, gray_img)
Returns Document
Return processed document to client
Return 400 Bad Request ("Low image quality")

Textract Document Analysis - Activity Diagram