

# **IT314 – Software Engineering**

## **Group 22 – Fingenie**

### **AI – Powered Balance Sheet Analysis Tool**

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## **System Testing**

#### **Team Members:**

Name	Student ID
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## **1. File Upload System**

### **EQUIVALENCE CLASS IDs**

#### **ECIDs   Description**

EC001 Valid PDF file (financial statement)

EC002 Valid Excel file (.xlsx, .xls)

EC003 Invalid file format (e.g., .txt, .docx, .jpg)

EC004 File size within limit ( $\leq 10\text{MB}$ )

EC005 File size exceeds limit ( $>10\text{MB}$ )

EC006 Corrupted or unreadable file

EC007 Empty file

EC008 Valid financial statement structure

EC009 Invalid financial statement structure

EC010 Multiple file upload (batch processing)

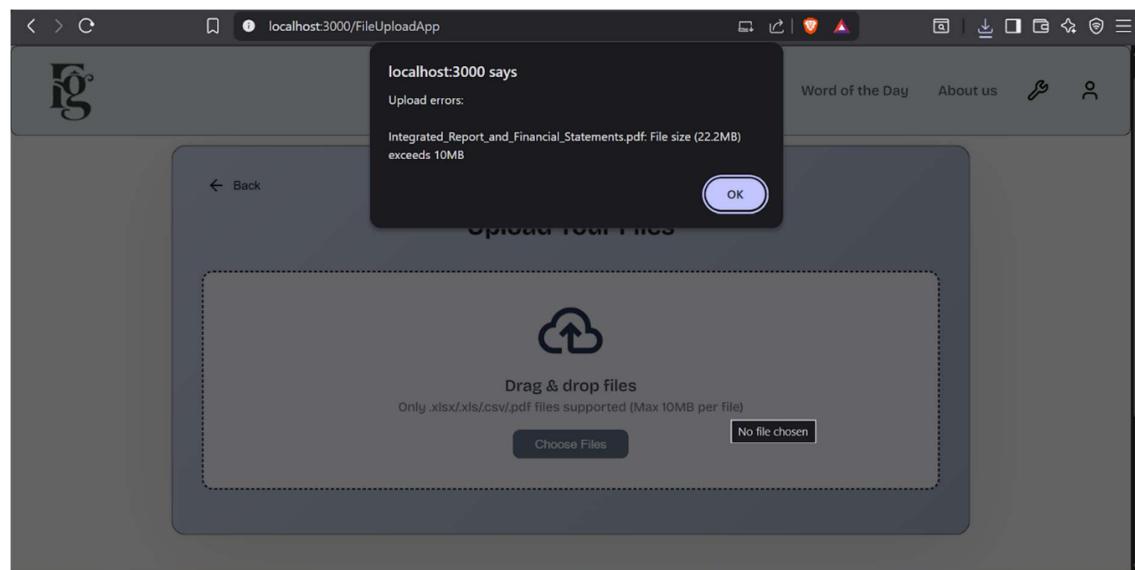
### **TEST CASES WITH ECID**

Test Case ID	Test Scenario	Test Case Description	Test Data	Expected Result	Acceptance Criteria	ECIDs Covered
TC001	Valid PDF uploaded	User uploads a valid PDF containing financial statements	File:Published-Results.pdf (Size: 9.1MB)	File uploaded successfully, processing initiated	System accepts valid PDF and begins data extraction	EC001, EC004, EC008, EC009

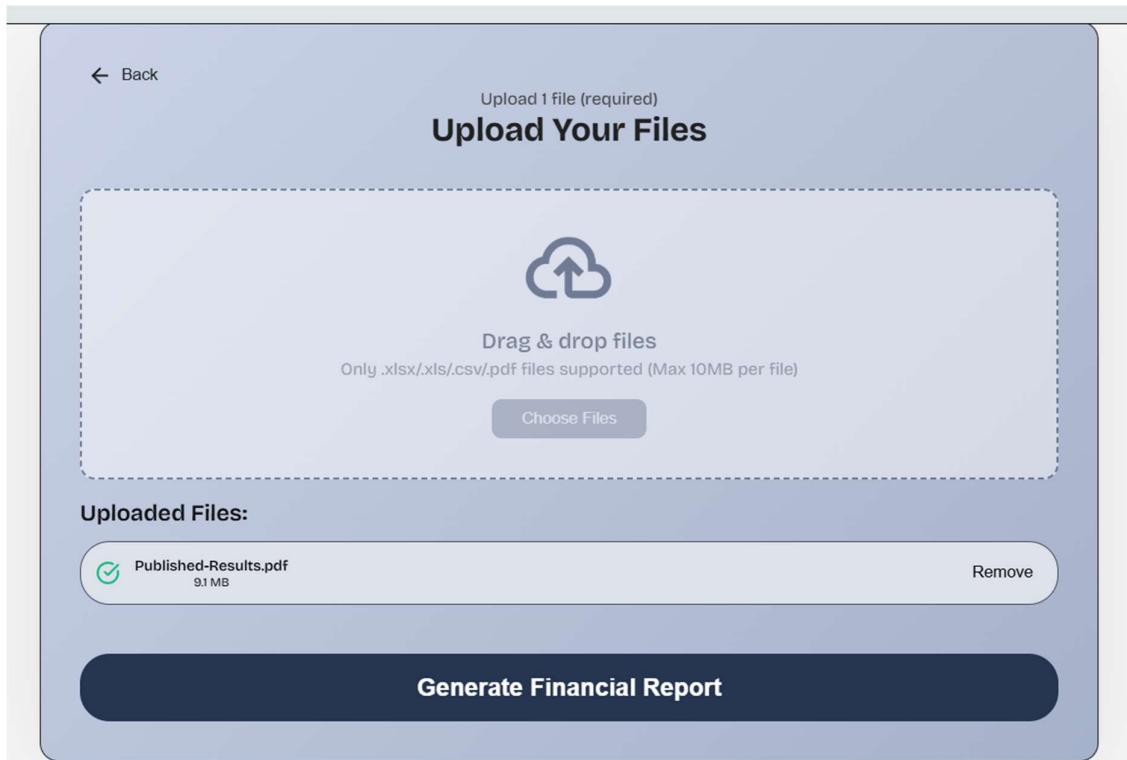
TC0 02	Valid Excel Uploa d	User uploads a valid Excel file with financial data	File: tatacsv_eda.xlsx (Size: 0.2MB)	File uploaded successfully , processing initiated	System accepts valid Excel and begins data extractio n	EC00 2, EC00 4, EC00 8
TC0 03	Invalid Format	User attempts to upload unsuppo rted file format	File: document.txt	Error message: "Upload errors: Only PDF,CSV,XLS ,XLSX files allowed."	System rejects unsupported formats	EC00 3
TC0 04	Oversi zed File	User uploads file exceedin g size limit	File:Integrated_Report_and_Financial _Statements.pdf (Size: 22.2MB)	Error message: "File size exceeds 10MB limit."	System enforces file size restrictio ns	EC00 5
TC0 05	Corrup ted File	User uploads a corrupte d PDF file	File: corrupted.pdf	Error message: "Unable to read file. Please upload a valid document."	System detects and rejects corrupte d files	EC00 6
TC0 06	Empty File	User uploads an empty file	File: Blank.pdf(Size: 0KB)	Error message: "Network Error. Please Try Again."	System rejects empty files	EC00 7

TC0	Invalid	User	File:SE_IT314(1).pdf	Error	System	EC00
07	Struct	uploads		message:	validates	9,
	ure	PDF		"Network	financial	EC00
		without		Error.	stateme	1
		valid		Please Try	nt	
		financial		Again."	structur	
		stateme			e	
		nt				
		format				

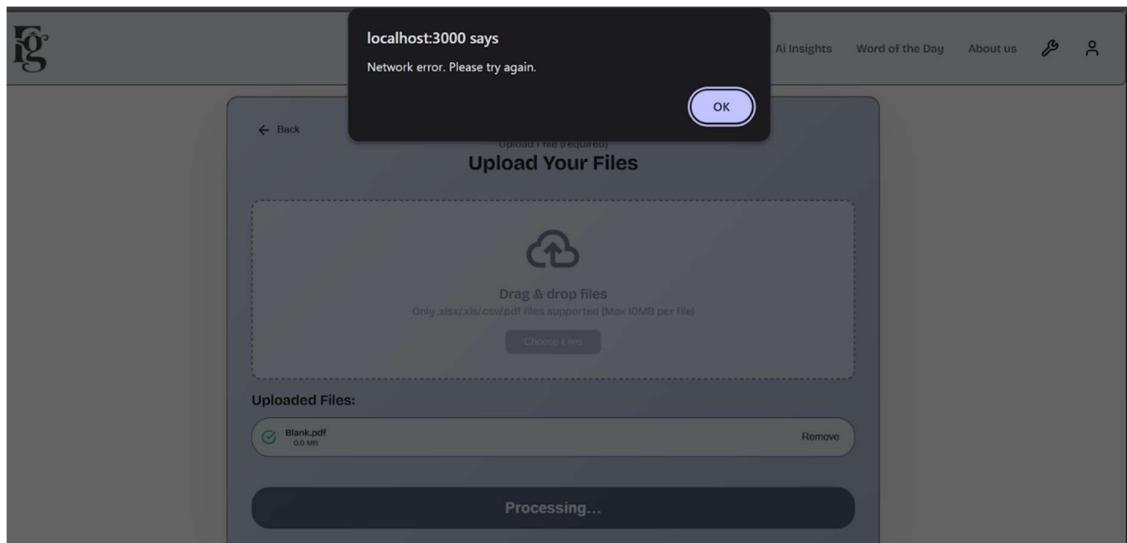
TC004:

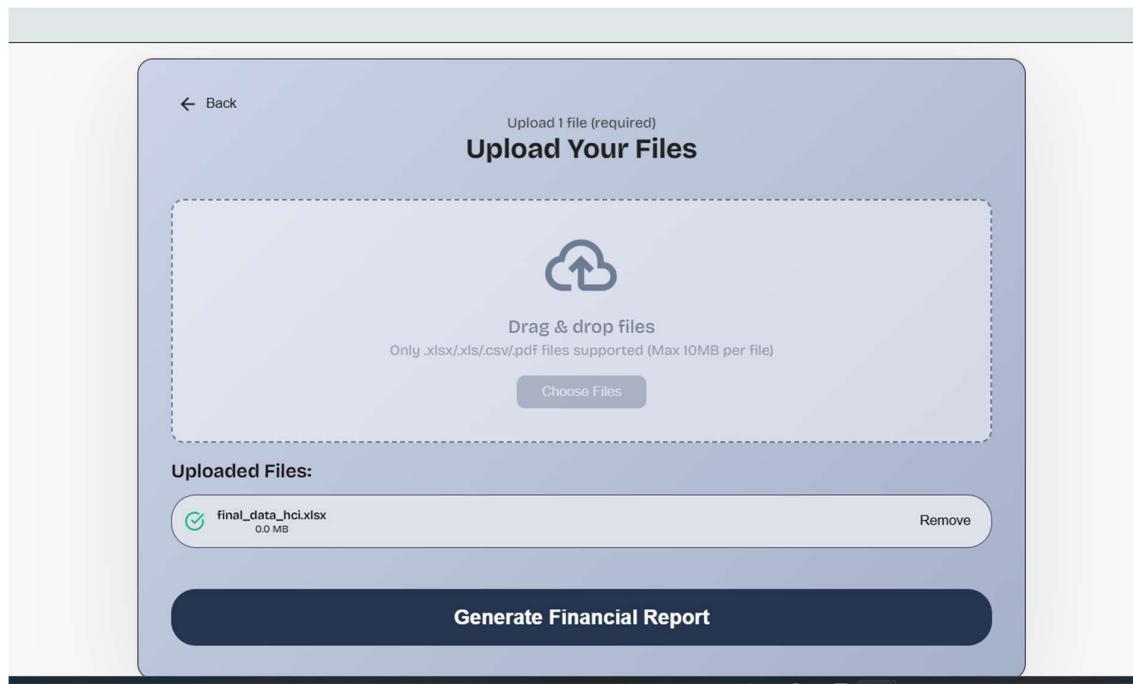


TC001:

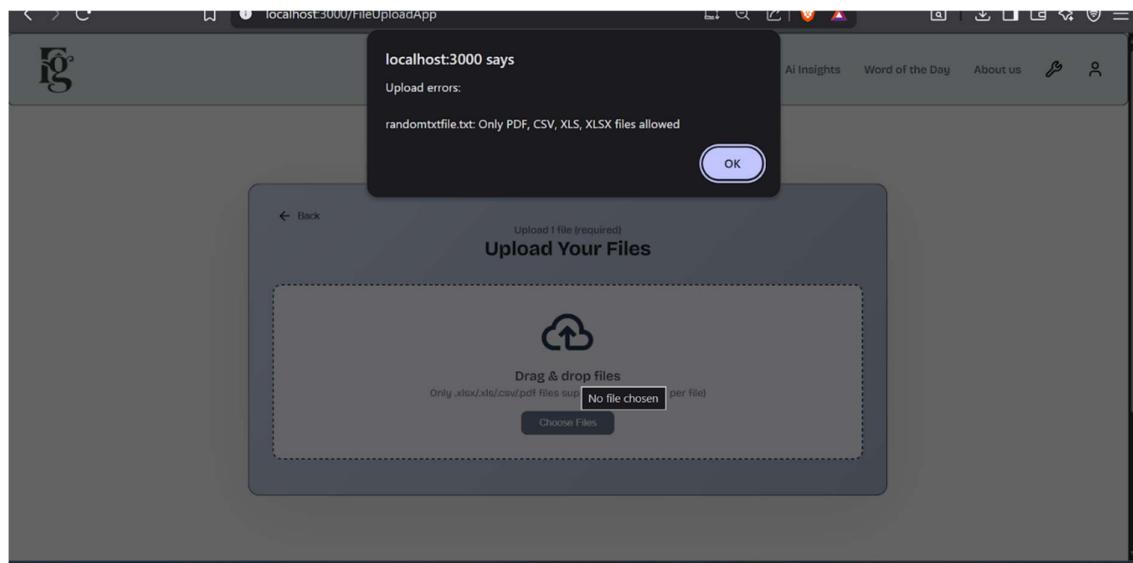


TC006:

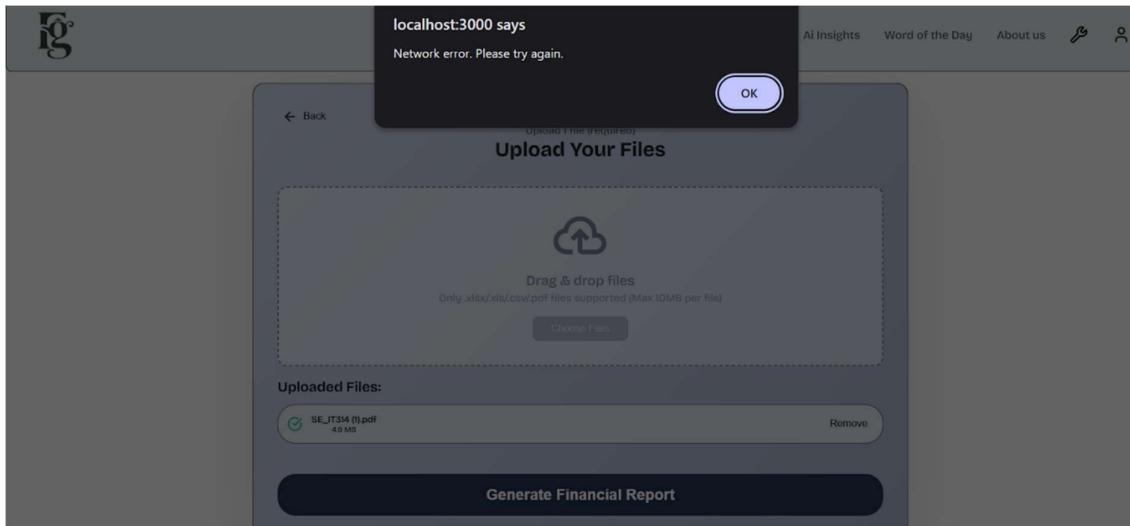




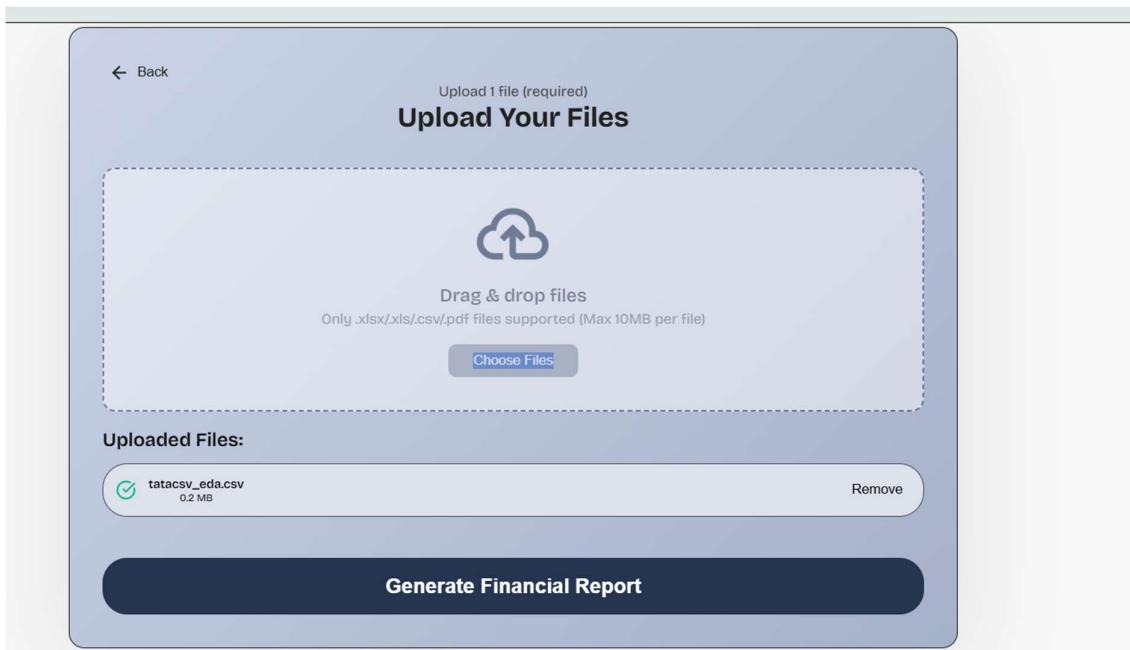
TC003:



TC007:



TC002:



## 2. Email & Password & Username

### EQUIVALENCE CLASS IDs

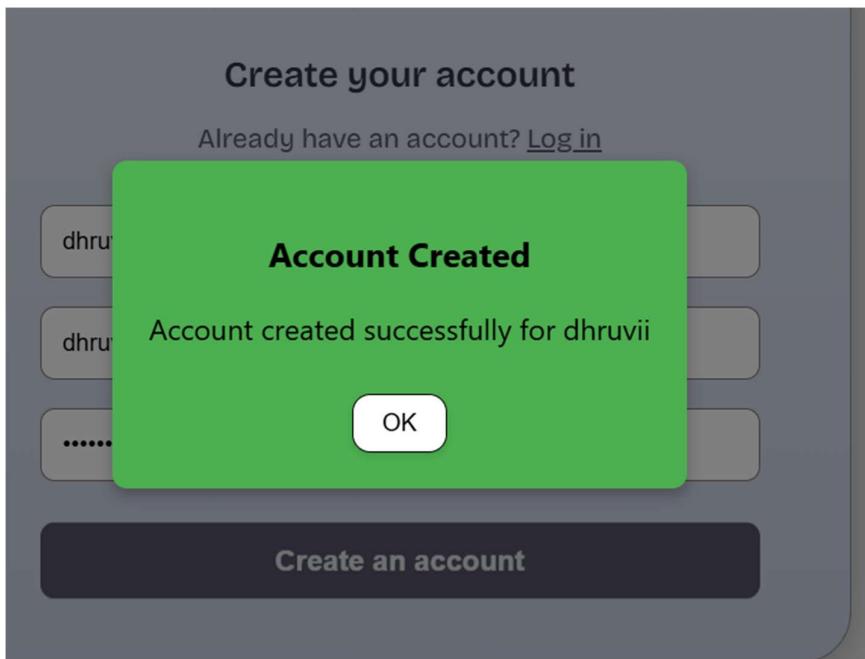
ECIDs	Description
EC101	Valid Email ID
EC102	Invalid Email ID

EC103	Valid Password
EC104	Invalid Password
EC105	Registered Email(for Login)
EC106	Correct Password
EC107	Email that is not registered
EC108	Incorrect Password
EC109	Registered Username
EC110	Unregistered Username

#### TEST CASES

Test Case ID	Test Scenario	Test Case Description	Test Data	Expected Result	Acceptance Criteria	ECIDs Covered
TC101	Valid Email address with valid password	Registration with valid credentials	Valid credentials	User getting registered and being logged in	User getting signed up	EC101, EC103
TC102	Invalid format Email address and Password	Register using invalid format email address and password	Invalid formatted email and password	System prompts user to give valid credentials	System not accepting non-correctly formed email and password	EC102, EC104
TC103	Wrong credentials	User logging in using wrong credentials	Unregistered username	System prompts user to provide valid credentials	System not accepting unregistered login request	EC107

TC101:



TC102:

The screenshot shows a "Create your account" screen with several validation errors. The first error is for the username field, which contains "Dhruvi". A red error message "Please enter a valid email address" is displayed below the field. The second error is for the password field, which contains ".....". A red error message "Password must be at least 8 characters" is displayed below the field. At the bottom is a dark blue "Create an account" button.

Dhruvi

dhruvinygmail

Please enter a valid email address

.....

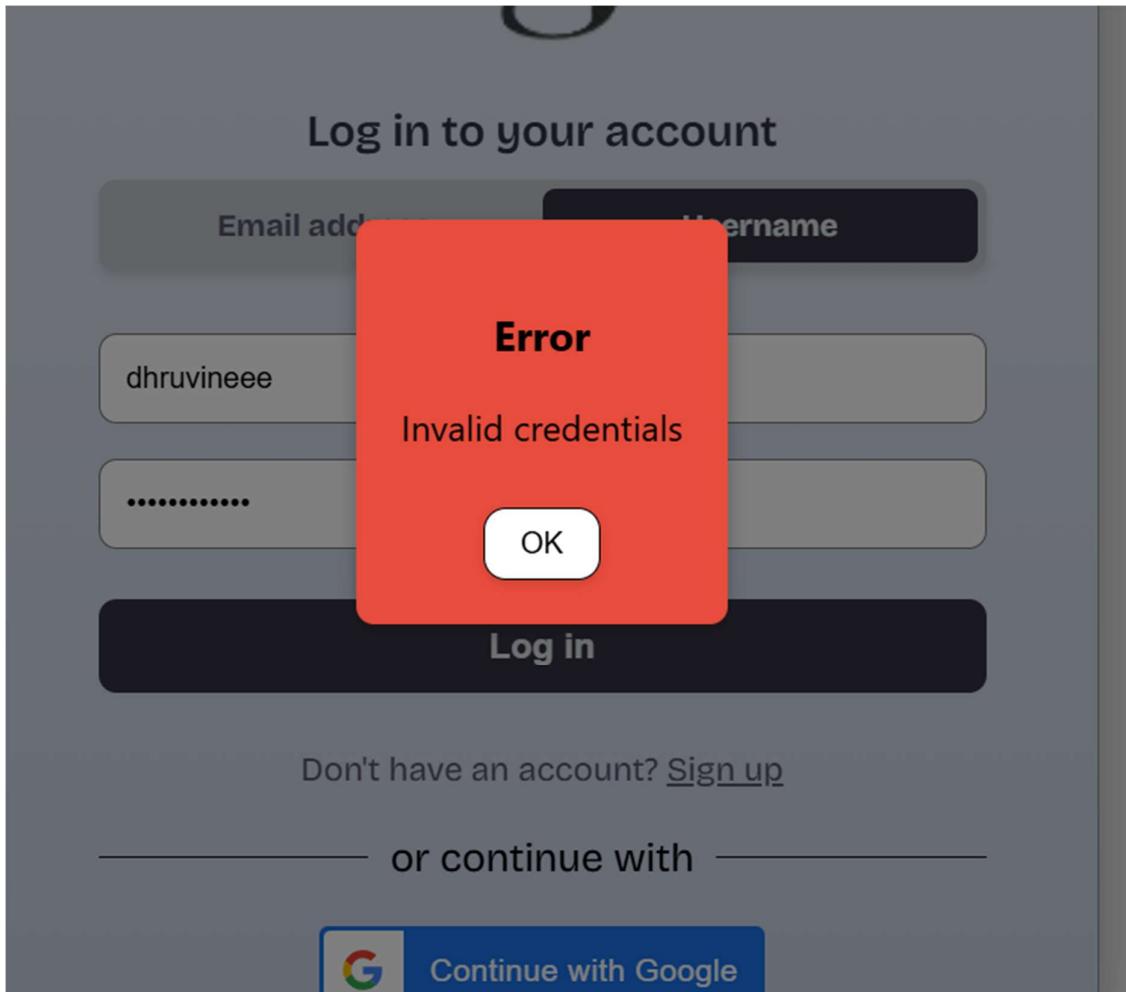
.....@gmail.com

.....

Password must be at least 8 characters

Create an account

TC103:



### 3. KPI Calculation & Analysis

#### EQUIVALENCE CLASS IDs

##### ECIDs Description

EC201 Valid data for ratios

EC202 Historical trend analysis (multi-period)

EC203 Year-over-year growth calculations

#### TEST CASES

Test Case ID	Test Scenario	Test Case Description	Test Data	Expected Result	Acceptance Criteria	ECIDs Covered
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TC201	Test KPI and Trend Analysis	Give year wise trend analysis based on given key performance Index	Balance Sheet over a period of time	Accurate calculation of all metrics	Calculated Results with respect to given data	EC201, EC202, EC203
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TC201:

**Critical Financial Trends Dashboard**

**Life Insurance Corporation of India - Executive Summary**

**Overall Assessment:**

Overall, Life Insurance Corporation of India presents a mixed financial picture, with strong liquidity improvements, and stable revenue streams, consistent profitability, while drastic liability reduction warrants strategic review. (analysis limited by data availability).

**Key Strengths**

- Strong liquidity position (64.91% growth)

**Major Concerns**

- Drastic liability reduction (-65.97% change)

**Recommendations**

- Leverage strong liquidity for strategic investments

Processed 5 files. 105 metrics found, 10 critical metrics analyzed.

Financial Trend Metrics (10 of 10)				
Metric	Growth Rate	Trend	Importance ↑	Data Quality
Total Assets	-73.27%	▼ strongly decreasing	100	Estimated
Total Liabilities	-65.97%	▼ strongly decreasing	95	Estimated
Total Revenue/Income	5.00%	— stable	90	Poor
Net Profit	5.00%	— stable	90	Poor
Shareholders Equity	2.00%	— stable	85	Estimated
Total Investments	2.90%	— stable	80	Fair
Cash & Equivalents	64.91%	▲ strongly increasing	80	Good
Loans Portfolio	7.25%	— stable	75	Good
Reserves & Surplus	30.75%	▲ strongly increasing	75	Fair

**Trend Analysis: Total Revenue/Income**

Showing 9 data points from 2017 to 2025

5.00% Annual Growth Rate      90 Importance Score

#### 4. Public Company Search

##### EQUIVALENCE CLASS IDs

ECIDs	Description
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EC301 Valid Company That is available

EC302 Company that is not available

##### TEST CASES

Test Case ID	Test Scenario	Test Case Description	Test Data	Expected Result	Acceptance Criteria	ECIDs Covered
TC301	Valid Company Data	Searching Valid Data	Valid Company Name	Valid Data of the Company	Valid Comapany data	EC301
TC302	Invalid Company Data	Searching Company that is not public or not available	Invalid Company Name	Error	System prompts that company not available	EC302

TC301:

The screenshot shows a search interface for company financial data. The search bar contains 'TATA'. Below it, a list of search results is displayed, each with a small icon, the company name, and its stock exchange listing (NSE). The results are:

- TATAMOTORS.NS Tata Motors Limited NSE
- TATASTEEL.NS Tata Steel Limited NSE
- TATAPOWER.NS Tata Power Company Limited NSE
- TCS.NS Tata Consultancy Services Limited NSE

The screenshot displays a company profile for TATAMOTORS.NS Corporation. At the top right, there is a green circular icon with 'POU4' and some numbers. To its right, the stock price is listed as '\$146(+92.03%)' and Market Cap as '\$92.26B'. The company name 'TATAMOTORS.NS Corporation' is prominently displayed. Below it, the stock symbol 'TATAMOTORS.NS' is shown along with its listing on 'NASDAQ • Technology • Software & Services' and 'Employees: 46,946'. A navigation bar at the bottom includes 'Overview' (which is selected), 'Chart', 'Analysis', 'Ratios', 'Peer Analysis', 'Balance Sheet', 'Income Statement', and 'Cash Flow'. Below the navigation bar are several key statistics boxes:

Market Cap \$92.26B	P/E Ratio 27.08	52W High \$235	52W Low \$114
Employees 46,946	Volume 1,110,568		

TC302:

## Search Company Financial Data

Enter a stock symbol or company name to get comprehensive financial data

Search

No companies found. Try AAPL, MSFT, TSLA, etc.

 **AAPL**  
Apple Inc.

 **MSFT**  
Microsoft Corporation

 **GOOGL**  
Alphabet Inc.

 **AMZN**  
Amazon.com Inc.

 **TSLA**  
Tesla Inc.

 **META**  
Meta Platforms Inc.

 **NVDA**  
NVIDIA Corporation

 **JPM**  
JPMorgan Chase & Co.