#### Objective

Enable automated, accurate, and compliant quarterly financial closures for Indian entities, including consolidation across multiple subsidiaries and ensuring compliance with Indian Accounting Standards (Ind AS), GST, TDS, Companies Act, SEBI (for listed entities).

#### **Functional Requirements**

These define what the system should do:

#### Data Ingestion & Validation

- Upload journal entries via Excel, CSV, or ERP API
- Ingest multi-tab Excel and classify by sheet/table
- Automatically validate journal structure and format
- Detect missing values, incorrect GL codes, and unbalanced entries

## Journal Entry Reconciliation

- Reconcile debit and credit entries for each journal
- Identify and flag duplicate or suspicious entries
- Provide summary by account and journal ID

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- Match payable and receivable entries between entities
- Flag discrepancies and suggest adjustments
- Generate intercompany reconciliation report

#### Provisions and Accruals

- Identify recurring provisions from past quarters
- Suggest journal entries for current quarter provisions
- Allow manual overrides with explanation

#### 💸 GST and TDS Compliance

- Reconcile GSTR-1/3B with sales register
- Match ITC from GSTR-2A/2B with purchase ledger
- Validate TDS entries with Form 26Q and PAN records

#### Fixed Asset Reconciliation

- Ingest fixed asset register
- Calculate depreciation (SLM/WDV)
- Compare with journal entries

Generate asset schedule with additions/disposals

#### Financial Consolidation

- Consolidate multiple entities' Balance Sheet, P&L, Cash Flow
- Eliminate intercompany transactions
- Support Ind AS 110, 115, 116 rules
- Prepare consolidated trial balance

#### Report Generation

- Generate standalone and consolidated financial statements
- Download P&L, BS, CF in Excel and PDF formats
- Prepare Board Pack (quarterly financial summary)
- Generate AOC-4 and MGT-7 XML for MCA filing

# Audit & Workflow

- Track audit queries and resolution history
- Maintain audit logs of agent actions
- Checklist tracker for closing steps by entity

## **Walter** Wanagement

- Role-based access (Finance, Tax, Auditor, Admin)
- Entity-based data access restrictions
- Action-level logging per user

# Non-Functional Requirements

These define **how** the system performs:

#### Performance

- Ingest and process files up to 100 MB or 100k rows
- Response time < 5 seconds for most queries
- Concurrency support for up to 500 users

#### **Security**

- AES-256 encryption for data at rest and in transit
- Multi-factor authentication (MFA)
- OWASP Top 10 compliance
- Role-Based Access Control (RBAC)

### Scalability

- Horizontal scaling of agents (via LangGraph)
- Microservice-based backend with FastAPI or similar
- Auto-scaling on cloud (AWS/GCP)

## Availability

- 99.9% uptime target
- Failover support with retry logic in agents

# **Maintainability**

- Modular, agent-based architecture for ease of upgrades
- CI/CD pipeline with GitHub Actions or GitLab CI
- Containerization with Docker and Helm charts

## Observability & Logs

- Centralized logging for all actions (Audit trail)
- Real-time dashboard for agent activity
- Alert system for agent failures or delays

## Data Residency & Compliance

- Option for India data center (for Indian clients)
- MCA, SEBI, and ICAI-compliant data processing
- GDPR-ready (for global clients)

#### Backup & Disaster Recovery

- Daily encrypted backups
- 1-click restore option
- RPO < 1 hour; RTO < 4 hours

# Workflows by personas

#### 1. Finance Executive

#### Responsibilities:

- Upload journal data
- Validate trial balances
- Review reconciliations and provisions
- Coordinate entity-wise closure

#### Workflow:

- 1. Login to dashboard
- 2. Upload journal entries (CSV/Excel/API)
- 3. Trigger JournalValidator Agent
  - → Checks nulls, balances, duplicates
- 4. Review flagged entries and make corrections
- 5. Trigger IntercoReconciliation Agent
  - → Identify intercompany mismatches
- 6. View status in Smart Closing Checklist

#### **Key Outputs:**

- Reconciled journal list
- Summary by GL
- Entity-wise close status

#### 2. Tax & Compliance Manager

#### Responsibilities:

- Validate GST and TDS compliance
- Match with statutory filings
- Approve tax summaries

#### Workflow:

- 1. Login to compliance panel
- 2. Upload GSTR-1/3B/2A and purchase register
- 3. Trigger GSTValidator Agent
  - → Matches GSTR with books, flags ITC mismatches

- 4. Upload TDS summary and Form 26Q
- 5. Trigger TDSValidator Agent
- 6. Approve or comment on reconciliation outcomes

### **Key Outputs:**

- GST mismatch report
- TDS shortfall or excess report
- Tax compliance dashboard

# **2** 3. Consolidation Lead

#### Responsibilities:

- Oversee multi-entity consolidation
- Approve eliminations
- Finalize group financials

#### Workflow:

- 1. Login to consolidation console
- 2. Review trial balances across entities
- 3. Trigger ConsoAl Agent
  - → Consolidates financials, removes IC balances
- 4. Review output: consolidated BS, P&L, CF
- 5. Trigger ReportBot to generate Board Pack
- 6. Export AOC-4/MGT-7 XML for MCA if needed

#### **Key Outputs:**

- Consolidated Financial Statements
- Intercompany elimination trail
- MCA-ready reports

# 4. Auditor (External or Internal)

#### Responsibilities:

- Review journal trails and approvals
- Check evidence and audit trail
- Raise and track audit queries

#### Workflow:

- 1. Access Audit Panel (read-only + comment access)
- 2. View audit trail of journal actions
- 3. Trigger AuditAgent to pull supporting docs
- 4. Raise queries with entity leads (comments/tickets)
- 5. Review query resolution and log approvals

#### **Key Outputs:**

- Journal audit report
- Supporting documentation
- Audit query tracker

#### **9** 5. Platform Admin

#### Responsibilities:

- Manage user roles
- Set close calendars
- Configure agent workflows

#### Workflow:

- 1. Login to Admin Panel
- 2. Onboard new users/entities
- 3. Configure agent triggers (manual/automated)
- 4. Manage access rights and workflow assignments
- 5. View platform-wide activity log

#### **Key Outputs:**

- Agent logs and retries
- Access control report
- Smart calendar with due dates

# Combined Workflow Overview (Simplified)

Finance Exec  $\rightarrow$  JournalValidator  $\rightarrow$  IntercoReconciler

Tax Manager → GSTValidator / TDSValidator

 $\downarrow$  Consolidation Lead  $\rightarrow$  ConsoAI  $\rightarrow$  ReportBot  $\downarrow$  Auditor  $\rightarrow$  AuditAgent  $\rightarrow$  QueryTracker  $\downarrow$ 

 ${\sf Admin} \to {\sf WorkflowConfig} + {\sf Access} \; {\sf Management}$ 

# **Key Modules (Handled by Agent Teams)**

Module	AI Agent	Key Responsibilities
1. Data Collection & Validation	DataFetcher Agent	Pull data from ERP, Tally, SAP, Zoho Books, spreadsheets, etc.; validate against schema and check for missing fields
2. Journal Entry Reconciliation	JournalBot	Reconcile manual and automated entries; flag discrepancies
3. Intercompany Reconciliation	Interco Agent	Identify mismatches between entities; raise red flags for unresolved balances
4. GST & TDS Compliance	TaxValidator	Verify GST returns (GSTR 1, 3B), TDS ledgers; match ITC claimed with purchase registers
5. Fixed Asset Reconciliation	AssetTracker Agent	Match FA register with depreciation, verify additions/disposals
6. Accruals & Provisions	Provisions Planner	Identify recurring and manual accruals, suggest provision entries based on previous quarter trends
7. Consolidation	ConsoAl	Combine financials from all business units; eliminate intercompany transactions; apply Ind AS 110
8. Variance Analysis	VarianceGPT	Perform quarter-on-quarter (QoQ) and year-on-year (YoY) variance analysis
9. Financial Statement Generation	FinStatBot	Prepare Balance Sheet, P&L, Cash Flow, and Notes to Accounts
10. Reporting & Filing	Filing Assistant	Prepare MCA filings (AOC-4, MGT-7), SEBI disclosures (for listed), and board reporting packs

### **Dashboards**

- Quarter Closing Checklist & Progress Tracker
- Entity-wise Status Report

- Unreconciled Items
- Tax Compliance Scorecard
- Consolidation Impact Summary
- Auditor Queries Management

### **Tech Stack & Integration**

- OpenAl API + LangGraph or Agent Swarm orchestration
- Data Connectors for:
  - o Tally, SAP, Zoho Books, Oracle Netsuite
  - o GSTN APIs, MCA Portal APIs
- Database: PostgreSQL or MongoDB
- Frontend: React + Tailwind (Admin dashboards, audit logs, agent actions)
- Backend/Workflow Engine: FastAPI or LangChain + Celery
- Security: Role-based access, audit trail, ISO/ICAI compliance

#### **Compliance Considerations**

- Ind AS 110, 115, 116 for consolidation, revenue, leases
- Companies Act, 2013
- GST returns matching with GSTR 2A, 2B
- Income Tax Act for TDS & depreciation
- SEBI LODR for listed companies

#### **Bonus Features**

- Smart Close Calendar: Automated reminders, agent-triggered nudges to teams
- AuditBot: Supports auditors with instant access to documents, ledger trails, and working papers
- What-If Analysis Agent: Predict impact of changes (new subsidiary, forex loss/gain, etc.)

- 2. Data Requirements (Per Module)
- 2.1. Journal Entry Validation

Column Name	Туре	Required	Description
Date	Date	<b>V</b>	Date of journal entry
Account	Text	<b>V</b>	GL account name
Туре	Enum (Debit/Credit)	<b>V</b>	Transaction type
Amount	Numeric	<b>V</b>	Amount involved
Description	Text	Optional	Narration of entry
Entity	Text	<b>V</b>	Business unit or legal entity
Journal ID	Text	V	Unique identifier for each entry

# 2.2. Intercompany Reconciliation

Column	Туре	Required	Description
Entity	Text	<b>V</b>	Source entity
Counterparty	Text	V	Receiving entity
Amount	Numeric	V	Amount transferred
GL Account	Text	<b>V</b>	A/c used
Invoice Ref	Text	Optional	To match specific IC invoices

# 2.3. GST Reconciliation

Column	Туре	Required	Description
Invoice No	Text	<b>V</b>	Supplier invoice number
GSTIN	Text	V	GST registration number
Invoice Date	Date	V	Invoice date
Tax Amount	Numeric	V	Tax charged
ITC Claim	Yes/No	<b>V</b>	Claimed ITC flag

# 2.4. TDS Reconciliation

Column	Туре	Required	Description
PAN	Text	<b>\</b>	PAN of deductee

Column	Туре	Required	Description
Section	Text	<b>V</b>	TDS section (194C, 194J, etc.)
TDS Amount	Numeric	<b>V</b>	Deducted amount
Challan No	Text	<b>V</b>	Payment challan reference
Date	Date	<b>V</b>	Date of deduction

#### 2.5. Fixed Asset Register

Column	Туре	Required	Description
Asset Name	Text	V	Asset identifier
Purchase Date	Date	<b>V</b>	Date acquired
Cost	Numeric	<b>V</b>	Acquisition cost
Depreciation Method	Text	<b>V</b>	WDV/SLM
Rate	Numeric (%)	V	Depreciation rate

## 3. Synthetic Data Samples

#### 3.1. Journal Entries (sample\_journals.csv)

Date, Entity, Journal ID, Account, Type, Amount, Description

2025-03-31, Entity A, J001, Sales, Credit, 500000, Sales to client X

2025-03-31, Entity A, J001, Bank, Debit, 500000, Receipt from client X

2025-03-31, Entity A, J002, Salary Expense, Debit, 200000, March salaries

2025-03-31,Entity A,J002,Bank,Credit,200000,Salary payout

2025-03-31, Entity B, J003, Interco Receivable, Debit, 150000, Transfer to Entity A

2025-03-31, Entity A, J004, Interco Payable, Credit, 150000, Transfer from Entity B

#### 3.2. GST Transactions (sample\_gst.csv)

Invoice No, GSTIN, Invoice Date, Tax Amount, ITC Claim

INV001,29ABCDE1234F1Z9,2025-03-10,18000,Yes

INV002,29ABCDE1234F1Z9,2025-03-12,5000,No

INV003,29ABCDE1234F1Z9,2025-03-20,10000,Yes

### 3.3. TDS Transactions (sample\_tds.csv)

PAN, Section, TDS Amount, Challan No, Date

ABCDE1234F,194J,5000,TCH001,2025-03-10

ABCDE5678H,194C,3000,TCH002,2025-03-15

### 3.4. Fixed Assets (sample\_assets.csv)

Asset Name, Purchase Date, Cost, Depreciation Method, Rate

Laptop 1,2023-05-10,60000,SLM,15

Office AC,2022-10-15,40000,WDV,20

# **Source of Data by Category**

### 1. Journal Entries

Data	Source	Format	Notes
GL transactions	ERP systems like <b>SAP, Tally, Zoho Books, Oracle Netsuite</b>		Exported monthly or quarterly
Manual journal adjustments	Internal finance team	Excel, CSV	Uploaded into the system

# **②** 2. Intercompany Transactions

Data	Source	Format	Notes
IC Receivables/Payables	ERP systems (Consolidated TB export)	Excel, CSV	Extract entity-wise
Counterparty mappings	Master data in ERP / Excel	Excel, Database	Defines entity pairs

### 3. GST Data

Data	Source	Format	Notes
GSTR-1 (Sales), GSTR-3B (Summary Return)		1	Downloadable via GST login or APIs
GSTR-2A/2B (ITC)	IGST Portal		Monthly purchase register match
Sales/Purchase Register	ERP	Excel	Matched with GST filings

# 💸 4. TDS Data

Data	Source	Format	Notes
TDS Deduction Summary	ERP or Tally	Excel, CSV	Section-wise deduction
Form 26Q / Form 16A	TRACES Portal – <u>www.tdscpc.gov.in</u>	PDF, Excel	PAN-based filing details
Challan Details	Income Tax Portal / ERP	Excel, CSV	Challan No., BSR code, date

# 5. Fixed Asset Register

Data	Source	Format	Notes
FA Register	ERP or manual tracker	Excel	With purchase date, cost, method
Depreciation Schedule	ERP / Finance team	Excel	Used for reconciliation

# **1** 6. Bank Statements

Data	Source	Format	Notes
Monthly statements	Net banking / ERP bank reconciliation module	PDF, CSV, Excel	Downloaded manually or via API in some cases
Bank Reconciliation Reports	ERP	Excel	Monthly/Quarterly exports

# 7. Trial Balance / Entity TBs

Data	Source	Format	Notes
l'	ERP systems or finance consolidation teams	Excel	Used for consolidation and variance analysis

# 8. Statutory Reports

Data	Source	Format	Notes
AOC-4, MGT-7 filings	MCA Portal – www.mca.gov.in	XML	Generated and filed annually
Board Pack	Internal finance team	PPTX, Excel	Prepared for quarterly review

Entity master list Internal admin config JSON, Da	tabase Used by agents for IC matching
CL Code Martin EDD	
GL Code Master   ERP   Excel, Da	tabase Ensures valid accounts used
User access roles Admin panel DB	Controls workflow permissions