AI Accounting Design Logic Flow – AI View Module

2024-03-26 Kevin Version 3.0

This accounting practice is well-structured and aligns with industry standards for automated bookkeeping and financial management. Here's why it makes sense:

1. **Profile Creation**:

   o Company Info Collection, including

      ➢ **Industry Category** or **Business Type** *BizEntity Setup - Basic - Industry*

      ➢ **Banking Info** (Chequing, Saving Account, Credit Cards) *BizEntity Setup - Tax and Financial*

      ➢ **User Privilege:** **Michael Design**

         ❖ **Admin**: Full access to all features, including user management, system settings, inventory adjustments, and comprehensive reporting.

         ❖ **Manager**: Access to high-level management features such as inventory tracking, reporting, and order management without the ability to change system settings.

         ❖ **Accountant**: Access focused on accounting-related tasks, such as processing sales and purchase orders, managing COGS, and handling financial reports.

         ❖ **Staff**: Limited access with the ability to view inventory levels, process transactions, and handle day-to-day operations without managerial permissions.

   pending Choose Other Accounting Software that XAIBOOKS is able to integrated into:

      ➢ Verifying the enabled Accounting software. If choose to use Existing, ie.

         ❖ QBO, QBD, Sage 50, Xero,

         ❖ NetSuite, Zoho,

      ➢ Then user will go to vBookkeep's **BOOKKEEPING link**, and **Import**:

         ❖ Trial Balance

         ❖ Import Vendor list,

         ❖ Customer list,

         ❖ COA list,

         ❖ Banking Info (Payment Info)

         ❖ Employee List

- o If choose Use XAIBOOKS, then Create the following templates:

Michael provide categories and types?
  - ➢ COA creating from the **Industry Category** or **Business Type**.
  - ➢ Vendor Template   *BizEntity Setup - vendor*
  - ➢ Customer Template   *BizEntity Setup - client*
  Michael provide? ➢ Payment Template
  - ➢ Mapping Pattern (Vendor name to COA) *Journal Entry - Bank/CreditCard - Journal Entry*
  - ➢ Banking Module setup
    - ❖ Create chequing, savings, credit cards accounts
    Include in Email Extraction? ❖ Store the Statements
    - ❖ General Reconciled bank statement in xAIBooks   *pending*

2. **Ledger Entry Document Types**: It includes:
   - o Receipts/Bills/Invoices   *pending*
   - o Statements:
     - ➢ Bank Statements *Journal Entry - Bank/CreditCard - Journal Entry*
     - ➢ Credit Card Statements *Journal Entry - Bank/CreditCard - Journal Entry*
     - ➢ Cash or Petty Cash Forms *pending*
     - ➢ Vendor Statements *pending*
     - ➢ Tax Paid Statements *pending*
     - ➢ Payroll Statements *pending*
     - ➢ Previous Years of: *pending*
       - ❖ T2 *pending*
       - ❖ Financial Statements *pending*
     - ➢ Insurance Expense Statements *pending*
     - ➢ Investment Statements *pending*
   - o Other Statements or documents *pending*
     - ➢ Employee List
     - ➢ Employment Agreement
     - ➢ Fixed Asset list

3. **Ledger Entry document file format**:

   o Electronic Images:

      ➢ in JPEG, PNG, BMP format etc. pending

      ➢ Using AI OCR to extract metadata pending

      ➢ Metadata Extraction list:

         ❖ Date email extraction

         ❖ Vendor, or client name Journal Entry - Bank/CreditCard - Journal Entry

         ❖ Tax Amount pending

         ❖ Total Amount email extraction

         ❖ Payment Method related with receipt/invoice? pending

         ❖ Reference Number email extraction

   o PDF

   o Excel, CSV

   o JSON format

4. **Upload Methods**:

   o **App**: Photo document then upload pending

   o **Download:** Clients/Accounting Professionals manually download documents to xAIBooks from their Cloud storage. pending

   o **Upload:** Clients/Accounting Professionals manually upload to xAIBooks from their local drive, including the way clients **email** forward their documents to accounting pending professionals.

   o **Auto Push**:

      ➢ Email + Cloud: Workflow Overview, per a separate document: email extraction

      User Registration with xAIBooks → Document Forwarding → Cloud Sync → Parsing & Summary Extraction → Email Summary with Download Link.

      ➢ Mobile Text + Cloud: similar logic, per a separate document: pending
      User Registration → Mobile Document Capture → Cloud Sync → Parsing & Summary Extraction → Text Confirmation with Download Link.

5. Dashboard:

   o Trial Balance ongoing…

   o Interactive with Drill-Down to General Ledger ongoing…

- Cash

- Income

- Expense

- Liability

- Equity

- Assets

- Accounts Receivable – AR

- Payroll Expense

Mighty Dragon - Trial Balance

Trial balance account	Unadjusted Trial Balance		Adjusting Journal Entries (AJE's)		Adjusting Trial Balance
	Debit	(Credit)	Debit	(Credit)	
Cash	2,000	-	-	-	2,000
Accounts receivable	5,000	-	500	-	5,500
Allowance for bad debt	-	(500)	-	(250)	(750)
Inventory	10,000	-	500	-	10,500
Prepaid expenses	6,000	-	600	-	6,600
Property, plant, and equipment	20,000	-	-	-	20,000
Accumulated depreciation	-	(5,000)	-	-	(5,000)
Accounts payable	-	(5,000)	-	(300)	(5,300)
Accrued payroll	-	(2,500)	-	(500)	(3,000)
Income tax payable	-	(1,000)	-	(1,000)	(2,000)
Deferred revenue	-	(1,000)	-	-	(1,000)
Equity	-	(7,000)	-	-	(7,000)
Sales	-	(60,000)	-	(500)	(60,500)
Cost of goods sold	30,000	-	-	(500)	29,500
Selling expenses	1,000	-	300	-	1,300
General and administrative expenses	4,000	-	500	(600)	3,900
Bad debt expense	1,000	-	250	-	1,250
Interest expense	2,000	-	-	-	2,000
Income tax expense	1,000	-	1,000	-	2,000
Total	$82,000	($82,000)	$3,650	($3,650)	$0

Sum = $0 ✓

Must =0

Source from https://www.universalcpareview.com/ask-joey/what-is-an-adjusted-trial-balance/

Interest Receivable		
Jan. 31	140	
Bal. 140		

Supplies			
Jan. 30	500	100	Jan. 31
Bal. 400			

Accumulated Depreciation: Equipment		
		75	Jan. 31
Bal. 75		

Salaries Payable		
	1,500	Jan. 31
Bal. 1,500		

Unearned Revenue			
		4,000	Jan. 9
Jan. 31	600		
Bal. 3,400			

Service Revenue		
	5,500	Jan. 10
	2,800	Jan. 17
	1,200	Jan. 27
	600	Jan. 31
Bal. 10,100		

Interest Revenue		
	140	Jan. 31
Bal. 140		

Supplies Expense		
Jan. 31	100	
Bal. 100		

Salaries Expense		
Jan. 20	3,600	
Jan. 31	1,500	
Bal. 5,100		

Depreciation Expense: Equipment		
Jan. 31	75	
Bal. 75		

PRINTING PLUS
Adjusted Trial Balance
January 31, 2019

Account	Debit	Credit
Cash	$24,800	
Accounts Receivable	1,200	
Interest Receivable	140	
Supplies	400	
Equipment	3,500	
Accumulated Depreciation: Equipment		$ 75
Accounts Payable		500
Salaries Payable		1,500
Unearned Revenue		3,400
Common Stock		20,000
Dividends	100	
Interest Revenue		140
Service Revenue		10,100
Supplies Expense	100	
Depreciation Expense: Equipment	75	
Salaries Expense	5,100	
Utility Expense	300	
Total	$35,715	$35,715

*Source from
LO 4.4 Use the Ledger Balances to Prepare an Adjusted Trial Balance – SPSCC — ACCT& 201

Start Ledger Entry with Receipts

6. **Document Classification**: The first step of identifying whether a document is related to an expense or income is critical for accurate bookkeeping. Proper classification ensures that each transaction is processed according to its nature:

   - **Expense**

   - **Income**

   - **Transfer**

   - **Parameters** to identify either Expense or Income:

     - Vendor name

     - Bill to

     - Payment Method or Payment Status

7. **Vendor or Customer**

   - Build a Vendor/Customer Profile Database (VCPD) at Datamond Cloud, per a separate document

     - Search/crawl Business data online from Google or Yellow Page etc

     - Create pre-defined VCPD in Datamond Cloud

     - Enable it searchable within Datamond Cloud

   - Users Create their own Vendor/Customer profile with the assistance of above

     - Create profile via Scan or extracted data

     - After extracted Vendor name from the receipts/invoices, Datamond Dashboard

       - ❖ If VCPD exists, we will automatically generate a pop out link to ask if the user will use this Profile.

       - ❖ If VCPD not exists, we will prompt the Vendor module to fill the line by line from the info extracted, then needs user to confirm.

     - Marked One Time (link to Datamond's Vendor Database), or Continuous (default)

     - Public (Auto-update from Datamond) or Private (Default)

8. **Payment Status**

   - Check **Payment Status** first,

   - Based on above Status, it determines the route of **AP/AR**:

   - **Expenses**:

- ➢ **Already Paid:** By checking if an expense is already paid, your system can decide whether to reconcile it immediately with bank or credit card statements, or

  - ➢ **Not paid yet:** to route it to the **Accounts Payable (AP)** module for future payment.

  - o **Income**:

    - ➢ **Already Received Payment:** Similarly, for income documents, determining if the payment has been received allows the system to reconcile it with bank statements or

    - ➢ **Not Received Payment Yet:** route it to the **Accounts Receivable (AR)** module if payment is pending.

9. **Chart of Accounts (COA) Categorization**:

   - o **Category Mapping**: The system uses predefined rules or AI models to map documents to specific categories. For example:

     - ➢ Income Categories: Sales Revenue, Service Income, Interest Income, etc.

     - ➢ Expense Categories: Office Supplies, Travel Expenses, Utilities, etc.

     - ➢ Expense: Based on above (5) the extracted Vendor Name with mapping rules, COA will be determined.

   - o **Custom Category Assignment**: Allow users to define and assign custom categories if the document doesn't fit into predefined categories.

   - o **Contextual Analysis**: AI or rule-based logic assesses the context (e.g., description, vendor type) to improve categorization accuracy.

   - o **Fixed AFixed Assets:**

     - ➢ If COA under Fixed Assets, then create a Fixed Assets Form

10. **Payroll Module with Time Sheet Integration**:

    - o Create **Employee List**

    - o **Core** Payroll Tasks:

      - ➢ Salary, tax, and benefit calculations.

    - o **Time Sheet** Integration:

      - ➢ Time Tracking & Calculation:

        - ❖ Automated computation of worked hours from logged time entries.

        - ❖ Direct input of hours worked into payroll calculations.

      - ➢ Overtime and Leave Management:

- ❖ Identification and calculation of overtime hours.
- ❖ Integration with leave management to adjust payroll for absences.

11. Inventory

   o Per a separate paper. It will combine requirement from Dylan's warehousing ERP as well.

12. **Tax Module**:

Sales Tax Management:

   o Automatic sales tax calculation based on

   ➢ location

   ➢ product/service category

   o Integration with **e-commerce platforms** and **point-of-sale systems** for real-time tax computation.

   o Report Generation

   ➢ Generation of sales tax reports for different jurisdictions:

   - ❖ HST/GST in Canada,
   - ❖ Fed/State/Municipal/County Tax in the US
   - ❖ Can be exported in Excel or PDF, and email to Accountant
   - ❖ Balance to pay to the related Treasury Dept.

   o Filing reminders and electronic filing options for state and local sales taxes.

Income Tax Management:

   o Income tax calculation based on business revenue and expenses.

   o Integration with income and expense tracking to provide accurate tax estimates.

   o Quarterly estimated tax payment calculations and reminders.

   o Generation of federal and state income tax reports.

   o Integration with popular tax software for easy filing.

Payroll Tax Management:

   o Automatic calculation of federal, state, and local payroll taxes.

   o Withholding tax management for employees, including social security and Medicare.

   o Generation of payroll tax reports and forms (e.g., 941, W-2, W-3).

o   Filing reminders and electronic filing options for payroll taxes.

13. **Reconciliation:** Automating the reconciliation process to ensures accuracy and reduces manual errors with the following statements:

   o   Metadata in Receipts comparing to the following

      ➢   Bank Statements,

      ➢   Credit Card Statements, or

      ➢   Payment Gateway, ie. PayPal or Stripe statements

      ➢   Vendor Statement

      ➢   Payroll Expenses

   o   Payment Verification

      ➢   Expense

      ➢   Income

14. **Posting to General Ledger:** Update the general ledger with categorized and reconciled transactions. Components:

   o   Ledger Entry Creation: Create entries in the general ledger for each categorized and reconciled transaction.

   o   Account Allocation: Automatically allocate the transaction to the appropriate general ledger account (e.g., Expenses, Income, AP, AR).

   o   Review and Approval: Allow for a final review and approval of the categorized transactions before they are posted to the ledger.

15. **Financial Statements**: Generating key financial statements directly from this data streamlines financial reporting:

   o   Income Statement,

   o   Balance Sheet

   o   Cash Flow Statement

   o   Budgeting

16. **Auditing Module**: Including an auditing module can provide additional assurance of accuracy and compliance, especially for businesses that undergo regular audits. It adds a layer of oversight to the financial processes. Here is the Core Features Development:

- o **Audit Trail:**

  - ➢ Maintain a log of all **categorization and reconciliation actions** to provide transparency and support internal or external audits.

  - ➢ Implement a detailed **audit trail** that logs all transactions and changes, including the user who made them, the time of the action, and before/after states.

- o **Automated Checks:** Develop automated checks to identify discrepancies, unusual transactions, or deviations from standard accounting practices.

- o **Compliance Monitoring:** Incorporate tools to verify that the accounting data complies with relevant accounting standards and regulatory requirements.

- o **Risk Assessment:** Integrate a risk assessment engine that prioritizes areas for audit based on factors such as transaction size, frequency, and user activity.

17. **Reporting Tools:** Create customizable audit reports that summarize findings, highlight potential issues, and provide recommendations.

18. **Integration with Accounting and Tax Software**: It allows for seamless data flow, reducing duplication of efforts and ensuring compliance with tax regulations by:

    - o Integrating with other accounting, ie. QBD, QBO, Sage, and Xero, and

    - o Tax software, ie. Profile Tax etc,

19. **Additional Features or Processes**: to enhance the proposed accounting practice:

    1) **Automated Data Extraction**: Implement Optical Character Recognition (OCR) and AI to automatically extract data from uploaded documents. This could include identifying vendor names, dates, amounts, and other relevant details, reducing the need for manual data entry.

    2) **Duplicate Detection**: Introduce a mechanism to identify and flag duplicate entries. This can prevent errors such as processing the same expense or income document more than once.

    3) **Approval Workflow**: For expenses, consider adding an approval process before the system processes or reconciles payments. This can be especially useful in organizations with multiple levels of financial oversight.

    4) **Reimbursement Workflow**: The reimbursement workflow for Small and Medium-sized Enterprises (SMEs) in North America is designed to efficiently manage the process of reimbursing employees for business-related expenses. This workflow ensures that reimbursement requests are submitted, reviewed, approved, and processed in a timely and compliant manner, while maintaining transparency and accuracy throughout the process.

5) **Vendor and Customer Management**: Integrate a system that automatically categorizes expenses and income by vendors and customers. This allows for better tracking of relationships, outstanding payments, and potential discounts or credits.

6) **Multi-Currency Handling**: If dealing with international transactions, include functionality for multi-currency support, including automatic conversion and reconciliation based on current exchange rates.

7) **Timesheet Recording**: This workflow is designed to accurately track and manage employee working hours, serving as the primary reference for payroll calculations. This workflow ensures that all recorded hours are properly documented, reviewed, and approved before being used to calculate employee compensation, overtime, and benefits.

8) **Split Function:** It could work for a receipt or income invoice where one total amount covers two different categories.

9) **Budgeting and Forecasting Tools**: Incorporate budgeting and forecasting features that use historical data to project future expenses and income, helping businesses plan and allocate resources effectively.

10) **Alerts and Notifications**: Set up automated alerts for various scenarios, such as overdue payments in the AP or AR modules, discrepancies during reconciliation, or significant variances in financial statements.

11) **Compliance Checks**: Integrate automated checks for compliance with local tax laws and accounting standards. This can include HST/GST validation, withholding tax considerations, and other regulatory requirements.

12) **Audit Trail**: Ensure that every action within the system is logged, creating a comprehensive audit trail. This is essential for both internal reviews and external audits, providing transparency and accountability.

13) **Customizable Reporting**: Allow users to create custom reports in addition to the standard financial statements. This could include detailed expense analysis, profitability reports by customer or project, and cash flow projections.

14) **Data Backup and Security**: Implement robust data backup and security measures, ensuring that financial data is protected from loss, unauthorized access, and other risks.

15) **User Roles and Permissions**: Introduce a user management system with customizable roles and permissions. This ensures that only authorized personnel can access or modify sensitive financial information.

16) **Integration with Payroll Systems**: If applicable, integrate the system with payroll software to automate salary payments, tax deductions, and related reporting.

17) **Machine Learning for Predictive Analytics**: Utilize machine learning algorithms to analyze trends and provide predictive insights. For example, the system could predict cash flow shortages or identify areas where cost savings could be made.

These enhancements can provide more comprehensive functionality, streamline operations, and offer greater value to users.

Start Entry with Bank Statement – Accrual Based

After uploading Bank Statements and Credit Card Statements in supported formats (PDF, CSV, Excel, etc.) and use OCR and parsing algorithms to extract transaction data, Datamond will provide

6. Transaction Extraction

- **Data Extraction**: Extract details such as

    - **transaction date**, email extraction

    - **amount**, email extraction

    - HST/GST

    - **merchant/vendor name**, Journal Entry - Bank/CreditCard - Journal Entry

    - transaction type (credit/debit), and Journal Entry - Bank/CreditCard - Journal Entry

    - any associated reference numbers. email extraction

7. Initial Setup

- **Create Accounts**:

    - Vendor or

    - Customer Profile

    - bank accounts (chequing, savings),

    - credit card accounts

- Upload above

    - in Excel,

    - CSV format

8. Transaction Categorization

- **Auto-Categorization**: **Chart of Accounts (COA)**: We uses AI or rule-based logic to suggest a basic Chart of Accounts (COA) structure, which can be customized by business type as needed.

    The system to categorize each transaction as either:

> - **Income**: Credits to the bank account, potentially categorized as sales, refunds, etc.

> - **Expense**:

>> - ❖ Debits from the bank account, potentially categorized as purchases, utilities, salaries, etc.

>> - ❖ Debits for those without receipts: bank fees, EI, CPP etc.

> - **Transfers**: Between accounts, such as moving funds between a checking and savings account.

- o **User Input**: For transactions that the system cannot automatically categorize,

> - ➢ it can prompt the user to select or create the appropriate category.

> - ➢ It won't change after user confirmation.

7. Mapping

- o Vendor description in Bank Statement MAPPING to Vendor in Datamond
- o Vendor in Datamond MAPPING to COA

8. AP/ AR Creation

- o Generate a AP/AR template for future use

9. Create Entries in Accounting Software

- o **Journal Entries**: For each transaction, the system generates corresponding journal entries. For example:

> - ➢ **Expenses**: Debit the relevant expense account, credit the bank account.

> - ➢ **Income**: Debit the bank account, credit the relevant income account.

10. Reconciliation

- o Cash (Petty Cash Registration) Statement
- o Credit Card Statement
- o Vendor Statement Reconcile
- o Payroll Expense
- o AP/AR:

> - ➢ After Expense or Income transactions fulfilled, Datamond will go back to search or match the AP/AR list.

- Receipts/Invoices Reconcile: Once the bank statement is done, Datamond will search if there is available receipts or invoices to match after click the Receipts reconciliation button

Start with Bank Statement – Cash Basis

Key Differences from Accrual-Based Flow:

1. **Recognition Timing**: Only record income when cash is received and expenses when cash is paid.

2. **No AP/AR Modules**: Since cash-based accounting doesn't deal with accounts receivable or payable, those modules are not used in this flow.

3. **Simpler Transactions**: The focus is solely on actual cash transactions, making the process simpler but potentially less detailed than accrual-based accounting.

This approach keeps the accounting records aligned with actual cash flow, making it easier to manage cash and understand the immediate financial position.