**Software Requirements Specification (SRS) Document**

**Project name: DolFin**

**Date:**

**Version:**

**By:**

**1. Introduction**

**Purpose:** The DolFin platform will be a comprehensive financial wellbeing solution that integrates financial insights, personalized advice, and secure data management.

**Scope:** The application is built using Python, Flask, Jupyter Notebooks, and integrates with the Basiq API to gather user financial data. The project involves multiple teams focused on enhancing features related to market research, front-end, back-end, data science/AI, and cybersecurity.

* **Benefits:**
  + Provide comprehensive financial insights through a central dashboard.
  + Help users understand their spending patterns, set goals, and manage finances.
  + Ensure data privacy and security through robust cybersecurity policies.
* **Objectives:**
  + Develop an MVP and transition to a commercial financial wellbeing product.
  + Incorporate new features and refine existing ones based on market research.
* **Goals:**
  + Evolve DolFin into a commercial-grade platform that is aligned with user needs.

1.2 **Product Value:**

The platform provides valuable insights to users about their finances, helping them effectively manage their budgets, identify areas for savings, and meet long-term goals.

1.3 **Intended Audience:**

The product targets individuals seeking to manage personal finances and track expenses, as well as financial professionals providing advice.

1.4 **Intended Use:**

Users will analyze their financial data through the dashboard and receive personalized advice through the AI chatbot, helping them better manage daily spending and plan for future goals.

1.5 **General Description:**

**Summary of Functions:**

**Dashboard:** Provides comprehensive, visual insights into spending and saving habits across user accounts.

**AI Chatbot:** Offers contextual advice and recommendations based on user data.

**Market Research:** Conducts research to identify market trends and product gaps.

**Backend Services:** Handles API operations, data storage, and security.

**2. Functional Requirements:**

🡪 **Market Research:**

* + New ideas and trends to guide financial wellbeing features.
  + Create user stories based on product requirements.
  + Competitive analysis and data collection to improve recommendations.
* **Frontend Product Backlog:**
  + Rebuild profile and dashboard routes.
  + Implement user registration and password reset pages.
  + Synchronize font sizes across screens and ensure responsive design.
  + "How DolFin Works" page and FAQ to explain platform features.
* **Backend Product Backlog:**
  + JWT authentication for user accounts.
  + Database and Basiq API services to handle user data.
  + Implement notification routes and optimize clear transactions.
* **Data Science/AI:**
  + Train transaction classification models.
  + Visualize spending patterns, home loan data, and predicted savings.
  + Build sentiment analysis models and identify fraudulent transactions.

**3.External Interface Requirements:**  
3.1 **User Interface Requirements:**

* Responsive designs for profile, dashboard, and notification pages.
* Synchronize fonts and layouts for consistency.

3.2 **Hardware Interface Requirements:**

* Support desktop and mobile devices with stable internet connectivity.
* Integrate with GCP and other APIs.

3.3 **Software Interface Requirements:**

* Python 3.11, Flask Web Framework, and Jupyter Notebooks.
* Integrate the Basiq API for data retrieval and JWT tokens for authentication.

3.4 **Communication Interface Requirements:**

* Email notifications and in-app messaging for alerts.
* Implement data privacy policies for secure user communication.

**4. Non-Functional Requirements:**  
4.1 **Security:**

* Implement password complexity requirements and encryption for sensitive data.
* Enable MFA and CAPTCHA for registration/login security.

4.2 **Capacity:**

4.3 **Compatibility:**

* Ensure compatibility with popular web browsers and mobile devices.

4.4 **Reliability:**

* Establish failover mechanisms to minimize downtime.

4.5 **Scalability:**

* Handle increasing user traffic, banking data, and visualizations.

4.6 **Maintainability:**

* Continuous integration for rapid deployment of features and fixes.

4.7 **Usability:**

* Provide clear, user-friendly navigation and error messages.

4.8 **Other Non-Functional Requirements:**

* **Legal Compliance:**  
  Ensure compliance with data protection and financial regulations like GDPR and CCPA.
* **Accessibility:**  
  Meet accessibility standards such as WCAG 2.1, providing keyboard navigation and color contrast.
* **Backup and Disaster Recovery:**  
  Implement regular data backups and disaster recovery plans.
* **Performance Monitoring:**  
  Monitor system performance to maintain response times and resource usage.

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**5. Definitions and Acronyms:**

* **AI (Artificial Intelligence):**  
  The capability of a machine to imitate intelligent human behavior, such as providing personalized financial recommendations via chatbots.
* **API (Application Programming Interface):**  
  A set of routines, protocols, and tools for building software applications. For DolFin, the Basiq API is used to retrieve financial data.
* **Basiq API:**  
  An API that provides secure access to bank account data, enabling users to link their financial accounts to DolFin for analysis.
* **CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart):**  
  A test to determine whether the user is human or a bot, enhancing security during registration or login.
* **CCPA (California Consumer Privacy Act):**  
  A California law that grants consumers more control over the personal information that businesses collect.
* **CSV (Comma-Separated Values):**  
  A text format used to store and share tabular data. DolFin uses CSV for data storage and sharing purposes.
* **GCP (Google Cloud Platform):**  
  A suite of cloud computing services that host and support DolFin's infrastructure.
* **GDPR (General Data Protection Regulation):**  
  European regulation designed to protect user data and privacy. DolFin needs to adhere to these standards.
* **JWT (JSON Web Token):**  
  A compact, URL-safe token used for securely transmitting information, typically used in user authentication.
* **MFA (Multi-Factor Authentication):**  
  An authentication method that requires two or more verification steps to gain access to an application.
* **NLP (Natural Language Processing):**  
  The use of computational techniques to understand and interpret human language. DolFin's chatbot uses NLP to process user queries.
* **SRS (Software Requirements Specification):**  
  A document that captures the system's requirements, scope, design, and features to guide development.
* **WCAG (Web Content Accessibility Guidelines):**  
  Guidelines to make web content more accessible to people with disabilities.