**Low-Level Document**

**Dataset Description:**

* **Source:** UCI Machine Learning Repository
* **Columns:**
  + LIMIT\_BAL: Credit limit
  + SEX: Gender (1=male, 2=female)
  + EDUCATION: Education level
  + MARRIAGE: Marital status
  + AGE: Age in years
  + PAY\_0 to PAY\_6: Repayment statuses (past 6 months)
  + BILL\_AMT1 to BILL\_AMT6: Bill amounts (past 6 months)
  + PAY\_AMT1 to PAY\_AMT6: Payment amounts (past 6 months)
  + default.payment.next.month: Target variable (1=default, 0=no default)

**Steps to Run:**

1. **Data Preparation:**
   * Load the dataset.
   * Handle missing values and normalize features.
   * Split data into training and testing sets.
2. **Model Training:**
   * Random Forest Classifier with optimized hyperparameters.
   * Evaluate using metrics like accuracy, precision, recall, and F1-score.
3. **Frontend Implementation:**
   * Create a Streamlit app.
   * Accept user inputs for prediction.
   * Display results dynamically.
4. **Deployment:**
   * Host the Streamlit app locally or on a cloud platform.

**File Structure:**

* dataset/: Contains the dataset.
* model/: Serialized trained model (CreditCardModel.pkl).
* webapp.py: Streamlit app script.
* README.md: Documentation.