EUDA Remediation Tool Setup Guide

This guide will help you set up the EUDA Remediation Tool for analyzing Excel End User Developed Applications (EUDAs) and converting them to Python applications.

Prerequisites

Before installing the application, make sure you have the following:

1. Python 3.8 or higher
2. PostgreSQL database (version 12 or higher) with pgvector extension
3. IntelliJ IDEA with Python plugin or PyCharm
4. Anthropic API key for Claude
5. AWS access key and secret key for Amazon Titan embeddings

Step 1: Database Setup

First, you need to set up PostgreSQL with the pgvector extension:

```sql
-- Connect to PostgreSQL as superuser
CREATE DATABASE euda_db;
\c euda_db;

-- Install the pgvector extension
CREATE EXTENSION IF NOT EXISTS vector;
```

Step 2: Project Setup in IntelliJ

1. Open IntelliJ IDEA
2. Click on "New Project"
3. Select "Python" as the project type
4. Choose a project location and name (e.g., "euda-remediation-tool")
5. Select your Python interpreter or create a new virtual environment
6. Click "Create"

Step 3: Copy Project Files

Copy the following files to your project directory:

- `main.py`: Main application code
- `utils.py`: Utility functions
- `.env`: Environment configuration (edit with your API keys)
- `requirements.txt`: Python dependencies

Step 4: Install Dependencies

Open the terminal in IntelliJ and run:

```bash
pip install -r requirements.txt
```

Step 5: Configure Environment Variables

Edit the `.env` file with your API keys and database configuration:

```ini
# Anthropic API Key for Claude
ANTHROPIC_API_KEY=your_anthropic_api_key_here

# AWS Credentials for Amazon Titan Embeddings
AWS_ACCESS_KEY_ID=your_aws_access_key_id_here
AWS_SECRET_ACCESS_KEY=your_aws_secret_access_key_here
AWS_REGION=us-east-1

# PostgreSQL Database Configuration
POSTGRES_HOST=localhost
POSTGRES_PORT=5432
POSTGRES_DB=euda_db
POSTGRES_USER=postgres
POSTGRES_PASSWORD=postgres
```

Step 6: Run the Application

In IntelliJ, right-click on `main.py` and select "Run" to start the application.

Using the Application

1. Click "Analyze New EUDA" to select an Excel file for analysis
2. The application will analyze the file and display a summary

3. Click on a previously analyzed EUDA in the list to view its details
4. Click "Generate Python Code" to create a Python equivalent of the EUDA
5. Use the chatbot to ask questions about the EUDA and get assistance with remediation

Troubleshooting

If you encounter any issues:

1. Check that all API keys are correctly set in the `.env` file
2. Verify PostgreSQL is running and the pgvector extension is installed
3. Ensure all dependencies are installed correctly
4. Check the application logs for error messages

Notes for Windows Users

On Windows, the application requires the pywin32 package to interact with Excel. This should be installed automatically through the requirements.txt file, but if you encounter issues, you may need to install it manually:

```bash
pip install pywin32==306
```

Additionally, you need to have Microsoft Excel installed on your machine for the Excel analysis to work properly.