

PROJECT SCOPE STATEMENT

Project Title: Development of an asynchronous framework for implementing API endpoints for accessing data in Sun Crest's Oracle database schema

Date Prepared: 1/27/23

Product Scope Description:

This document has been created by team Core Fore in response to a request to assist the client to modernize its software architecture by adding an API layer to facilitate information passing between its core system and other external systems. Team Core Four will develop and implement FastAPI (web framework) concepts and connect to Oracle database to fetch oracle data directly on a web page, as giving access of the oracle database is not a feasible option and hence the client wants us to display the data on FastAPI local-host (web page).

Further, we will analyze and enhance the framework to extract the data in different formats based on the client's requirements.

This document describes the scope of the work that will be delivered in the execution of this project and outline the understanding between the client and team concerning the solution delivery.

Project Deliverables:

Phase I

- Selection of a standard API framework (fastAPI will be used initially to determine its suitability)
- Creating and testing a API interface from scratch
- Ensuring that the API framework can connect and extract data from Oracle
- Setup of FastAPI on development server (including comprehensive documentation)
- Enhance and test to service asynchronous calls from multiple clients at the same time
- Enhancing to ensure that asynchronous calls are not blocked at the Oracle library level
- Create small performance test tool to spin up multiple synchronous calls to the api
- Run and document baseline performance test which will simulate real-world use of the api

Phase II

- With the connected FastAPI in Phase I, we will enhance the framework in a way that it will produce XLS file from the Oracle database.
- Additionally, we will be modifying the FastAPI to load the whole Oracle Database Table from the XLS file

Project Assumptions and Considerations:

The following points will be taken as considerations by the team during the development phase, if there is any update, the client requires to mention it.

- Time permitting we will create a generic CRUD interface to be used as a template for future enhancement.
- Any new customization will be considered as New / Change request which will require discussion and additional research before implementation.
- The client will need to let team know if there is any update required in the Scope of work as the development will be considered as per the features mentioned in the scope.
- The deadline of the Phase may vary depending on the changes updated by the client.

Technical Specifications:

The following are the technical requirements for the development of the project

- Python 3.10.7
- Oracle Developer 19c
- Visual Studio Code (IDE)
- FastAPI
- JDK 19
- Excel

Key people:

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Notes:

- The Core Four team has worked with the client to split the product into two phases - with Phase II being contingent on the success of Phase I.
- In Phase I The Core Four team will be responsible for building the prototype from scratch and providing enough testing results to the client to ensure that client can make an informed decision to use the API framework in production.
- Upon success, Phase II will involve the Core Four team enhancing the framework to provide more sophisticated functionality in the API to create data from Excel spreadsheets and create excel spreadsheets from data.