

Project Number: 26

Project Title: Web Platform for Microservices and APIs

Project Clients: Dr. Basem Suleiman

Project specializations: Web Application Development;Software Development;

Number of groups: 2 group

Main contact: Dr. Basem Suleiman

Background:

The goal of this project is to design and develop a web application for creating and maintaining microservices and APIs.

Requirements and Scope:

Users accounts and profile management

Scraping data from websites and other sources

Data storage and retrieval using different formats

System management

Data collection by end users

Required Knowledge and skills:

Users should be able to create their accounts and log using email, and social media. Users must be verified

Implement user roles including Admin, service providers, and service consumer, and public user with appropriate access controls.

Administrator user should have the full privilege in the system and should be able to manage access control and oversee the platform.

Users should be able to manage their profiles, including personal details, subscription preferences, and API usage data.

Service providers can add their APIs/microservices with structured documentation of technical and non-technical details. They can add tags to their services as well.

Service providers, and admin users, can automatic extraction of service/API details from a service description and source code (e.g., using Swagger or other documentation)

Service providers can manage multiple versions of their services/APIs.

Service providers can respond to ratings/reviews on their services/APIs

Users can search for microservices/APIs based on keywords, category, provider, etc

Recommend related/similar services in search results

Service providers can see dashboard – summary analytics of key insights of their services

Users can filter microservices/APIs based on type, category, date, version and other important information.

Service consumers, and public users, can search, browse the details of, and subscribe to services/APIs (basic and advanced search with filters)

Service consumers can test the service with input parameters

Service consumers can subscribe to services/APIs, so they receive notifications for any updates

Service providers can track services/APIs analytics for each service (e.g., subscriptions, rating, search).

Expected outcomes/deliverables:

- Robust and scalable architecture supporting seamless user experience in web platforms and other devices.
- Fully functional application (robust, secure, and performance)
- Project documentation including source code, system architecture and design, UI/UX, different types of testing, user manuals and guide, technical guide.