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Batch A

EXPERIMENT 6

Aim:

To create a web mashup of web services using an open-source framework.

Requirements:

Django, Web Browser(Chrome), API keys of respective services

Problem Statement:

Olympic management system is an app which targets to provide various sports event organizers a platform to promote their events and also to give the general users/participants information about the sports events in which they're interested

Theory:

1) **Web mashup:**
   A web mashup, or mashup website, is content that's been "mashed up" or mixed together from various sources so it can be shown differently. This is done using a web application that takes information from one or more sources and presents it in a new way or with a unique layout. A Web Mashup is a web application that is composed of content from different other web applications from different domains. It is usually a remix of data with other web services. It involves two or more applications combined to create a new application. They allow information to be viewed from different perspectives and combine data from multiple sources into a single integrated tool. It is done using a web application that takes information from one or more sources and presents it in a new way or with a different graphical user interface.

2) **Benefits of web mashup:**
   The web is continually growing more open and more social. Because of this, many websites open up programming interfaces (APIs) that allow developers to get at their core information. A prime example of this is Google Maps, which is a very popular interface to use in mashups. Google allows developers to access their maps through API's. The developer can then combine these maps with another stream of data to create something new and unique. Web Mashups helps in reducing development costs from lightweight integration providing great value to end-users.

3) Components of web mashup

1. SOAP:
    a. Simple Object Access Protocol(SOAP) is a network protocol for exchanging structured data between nodes.
    b. SOAP allows processes to communicate throughout platforms, languages, and operating systems since protocols like HTTP are already installed on all platforms.
2. REST:
    a. REpresentational State Transfer (REST) is an architectural style that defines a set of constraints to be used for creating web services.
3. XMLHTTPRequest:
    a. It is used to communicate with the server without refreshing the web page and thus increasing the user experience and better performance.
    b. The XMLHttpRequest object is used to exchange data with a web server or update mini parts of a web page, without reloading the whole page.
4. XML-RPC:
    a. It is a very simple remote procedure call protocol used to exchange information using XML data over a network.
    b. The XML–RPC uses HTTP for transport allowing complex data structures for processing.
5. JSON-RPC:
    a. JSON-RPC is a remote procedure call protocol using JSON.
    b. It is very much similar to XML-RPC protocol with few data types and commands allowing multiple calls to be sent to the server with asynchronous responses.

4) Advantages of web mashup

1. Time-saving, therefore, facilitate rapid development
2. Cheap and cost-effective.

Implementation:

Conclusion:

From the above experiment, I have learned the following:

- Knowledge about web mashups
- Hands on experience of creating web mashups for the given problem statement.

References:

1. https://www.geeksforgeeks.org/difference-between-web-services-and-mashup/
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3. https://rapidapi.com/principalapis/api/body-mass-index-bmi-calculator/
4. https://rapidapi.com/darkmanaminovic/api/email-sender1/
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6. https://rapidapi.com/DenchCity/api/bodybuilding-quotes1/