CSE 445 Distributed Software Development
Assignment 5

Team-5

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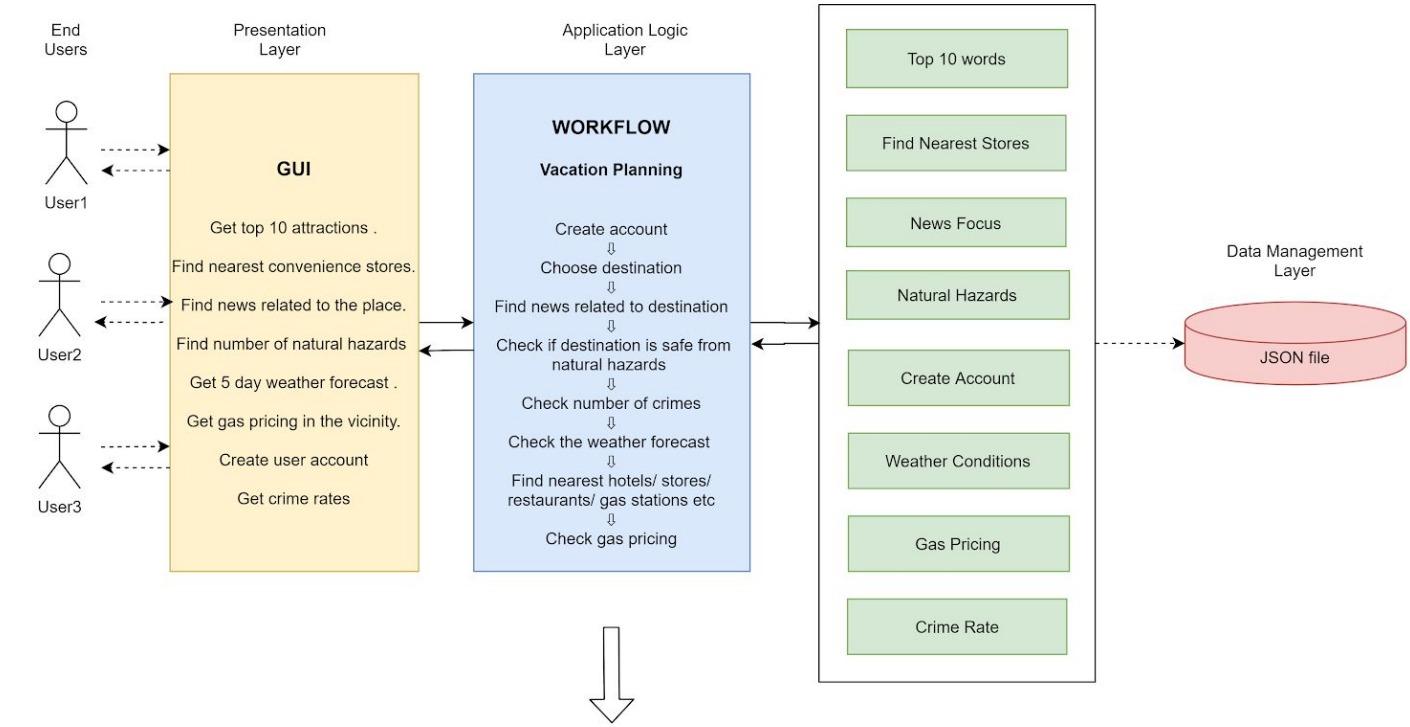
1.1 Proposed Service-Oriented Computing system

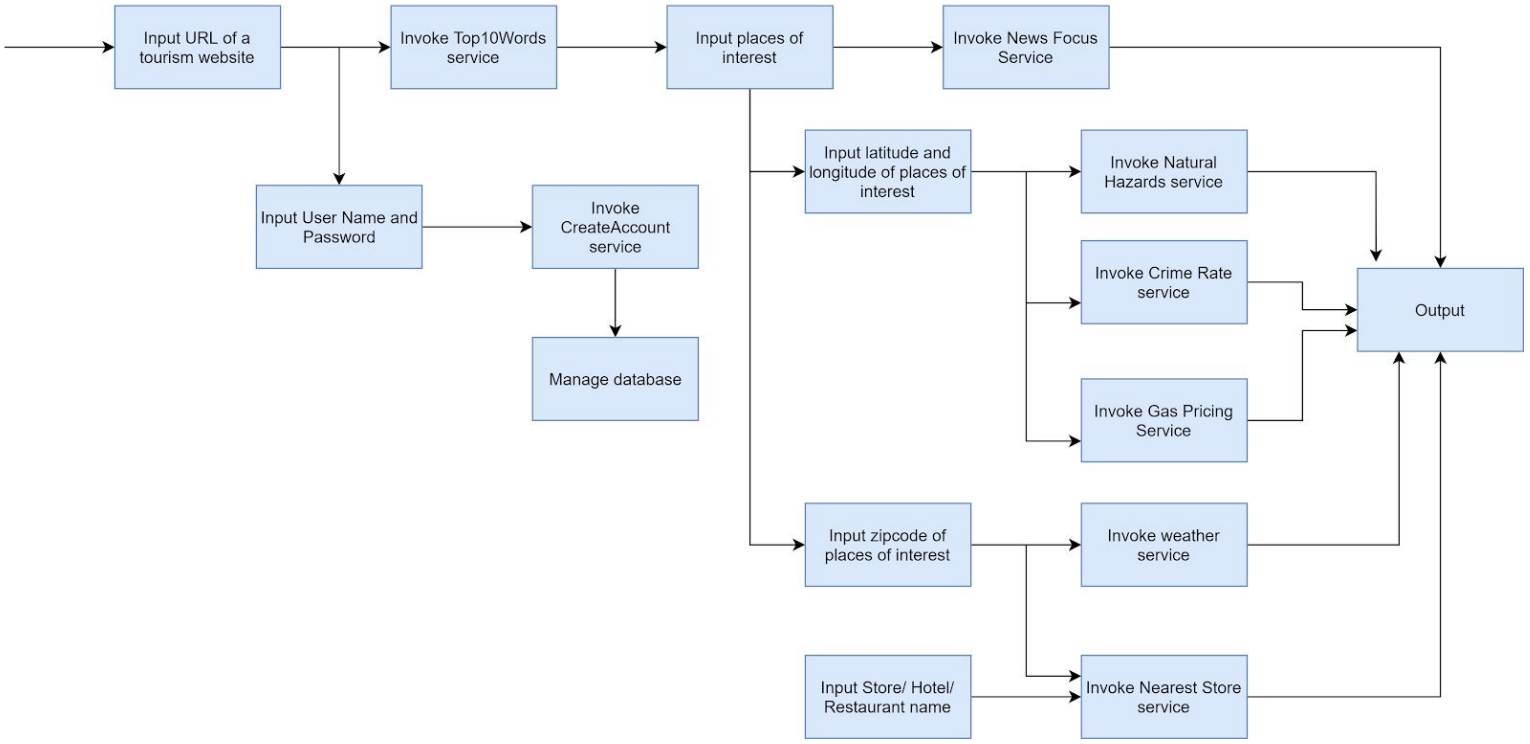
The arrival of the holiday season comes with the drudgery of planning a vacation. Planning a vacation is tricky given that we need to get various factors right to make it a bon voyage. Here is a one-stop solution- a vacation planning system that provides all the services. The first step involves the daunting task of choosing a destination. The proposed system provides a top 10 world service, a creative way of selecting the candidate vacation destinations based on the frequency of its occurrence in a website.

Further, to help you decide if the destination suits your needs and expectations of you and your family you can use the news focus service which provides links to all local news of the destination, natural hazard index service which tells you how safe the location is in terms of natural hazards like earthquakes, a crime rate service to check the crime rate of the area you will be residing and visiting. After narrowing down your dream destination, the weather service can help you pack and plan activities according to a 5-day weather forecast of your location.

The system also provides the nearest store/hotel/restaurant locator service that assists you in navigating geography which hitherto was unbeknownst to you. The gas pricing service goes one step further by showing nearby gas stations along with gas prices in each. A create account service is used to manage the user account.

1.2 System design and workflow





1.3 Service Directory

Service Directory				
Address Local Host				
Team 5				
Provider Name	**Service Name**	**Try It**	**Service Description**	**Planned resources to implement service**
Rishti Gupta	**Top10Words:** **Input:** A web page url string **Output:**An array of strings that contains the ten most-frequently occurred words in descending order of their frequencies		Analyze the webpage at a given url and return the ten most-frequently occurred words in the webpage. Return the words in the descending order of their appearing frequencies	Write my own code and use local components.
Rishti Gupta	**Find the Nearest Store:** **Input:**two strings **Output:**string message		Find the provided storeName closest to the zip code and return the address. If no store is found, return an error message	**API Used:** 1). Getting latitude and longitude from a given zip code: Geocoding API (Google) - https://console.cloud.google.com/ 2). Getting the address of the nearest store taking the store name as the parameter: Google Places API- https://console.cloud.google.com/

Rishti Gupta	**Weather Service:** **Input:** a U.S. zip code **Output:**An array (or list) of strings, storing 5-day weather forecast for the given zip code location		Get a 5-day weather forecast service of zip code location	Retrieve information from: https://openweathermap.org/api
Rishti Gupta	**CrimeRate:** **Input:** latitude and longitude		Get the number of incidents (crime rate) of a location using the latitude and longitude	Retrieve information from: https://crime-data-explorer.fr.cloud.gov/api
Arun Deepak Chandrasekar	**NewsFocus:** **Input:** a list of topics or key words **Output:**A list of URLs in which the given topics are reported		Find news links on specific topics	Retrieve information from : http://content.guardianapis.com/search?q=
Arun Deepak Chandrasekar	**NaturalHazards:** **Input:** latitude and longitude **Output:** a number reflecting the natural hazards at the location		Create a service that returns the natural hazards (Tsunamis, earthquake, volcanoes) index of a given position using latitude and longitude	Use the service from USGS site: https://earthquake.usgs.gov/ws/
Arun Deepak Chandrasekar	**CreateAccount:** **Input:** username and password **Output: -** (user logged in)		Create an account on the vacation planner website to access the services provided in it. The user is logged in once it has created an	Write my own code and use local components.

			account successfully	
Arun Deepak Chandrasekar	**<u>GasPricing:</u>** **Input:** latitude and longitude **Output:** get gas prices and gas station (distance) details		Get gas prices of the nearby gas station details by providing the location of the user(latitude and longitude)	Retrieve information from: https://developer.nrel.gov/docs/transportation/alt-fuel-stations-v1/nearest/