

Smart city Project

Andrew is planning to visit Brisbane city for the first time and he contacted one of his friends Susan, a software vendor, who lives in Brisbane to recommend places to visit. Susan realized that there is no centralized system she could direct Andrew to gather information on parks, museums, restaurants etc. in Brisbane city.

She thought of developing a web based system which stores information about Brisbane city. She knew one of the IFB299 teaching team member who asked her to put her system requirements in writing.

The following is a brief description of these requirements. The IFB299 teaching team wishes your team to develop a system meeting these requirements. The product owner(s) of your team are allowed to add/update/delete these requirements so that it improves the functionality of the system overall.

Susan thinks that the system should cater three types of users; tourists, students, businessman. When a user logs in, they can view primarily relevant information based on their user type as described later on. Each type of user is also allowed to view information related to other user types but only temporarily while remaining logged in the system in his/her current session.

Any new user who is visiting the web system should be able to create a user account (student, tourist and businessman.) An existing user should be able to log into the system via a username and password.

Anyone should be able to visit the web based system by navigating through their browsers. The welcome page should provide facilities to create new user accounts with types that of student, tourist or businessman.

There is also a fourth type of user namely an administrator. An administrator user account is a special account. Therefore, an administrator user account can be created using a separate web page.

Each new user must provide his/her name, a unique username, and a password to create an account in the system. The system should also be capable of storing additional user information such as phone number, email address and residential address if a user wish to provide those details at the time of user registration.

The functionalities required in the system based on each user type is as below.

Administrator

An administrator user account can be created by another administrator only. Initially, Susan will be the only administrator.

The administrator role is responsible for creating/modifying all the data for the city. Data for colleges, industries, libraries and hotels is separate from city information. City information consists of data for parks, zoos, museums, malls, restaurants and city map.

An administrator should be able to create following information in the system.

- Colleges: college name, address, departments and email address
- Libraries: library name, address, phone number and email address
- Industries: industry name, address, industry type and email address
- Hotels: hotel name, address, phone and email address
- Parks: park name, address, phone and email address
- Zoos: zoo name, address, phone and email address
- Museums: museum name, address, phone and email address
- Restaurants: restaurant name, address, phone and email address
- Malls: mall name, address, phone and email address

An administrator should also be able to upload a map of the city to the system.

Tourist

When a tourist logs into the system, he should be able to view hotels and city information.

Student

When a student logs into the system, he should be able to view colleges, libraries and city information.

Businessman

When a businessman logs into the system, he should be able to view hotels, industries and city information.

Other Requirements

System should also be able to provide similar information about other Australian cities such as Sydney, Melbourne, Adelaide, Perth, Canberra, Hobart, Darwin etc.

It is also required that your team design the system in a way that it can be extended in the future to cater more requirements such as adding information on city bus services, metro rail, government offices, courier services, travel services, education services, health services, business services etc.