MWC3 2024 Database Design
Problem Statement

Help! The US National Park Service has decided to raise their America the Beautiful pass (which includes unlimited access fees to all the national parks) from $80 to $400 to cover increases in costs. However, they are aware this will cause hardship to many of the 318 million visitors each year, so they are changing their pricing structure to allow an ala cart style pass, where pass purchasers can customize their pass to specific parks only, or for all parks. These passes will allow unlimited access during the year. They have designed a front-end form (shown below). Since there are hundreds of thousands or millions of registrants each year, the database needs to be designed to be efficient and avoid redundant data.

The following outlines several important items you need to consider when designing and implementing your database.

1. As 318 million visitors visit the parks each year and millions sign up for passes, the database should minimize the amount of redundant information stored.

2. **Name**: Required full name, future changes allowed; names up to 100 characters should be allowed.

3. **Address**: 0 or 1 allowed. While most addresses will come from the United States, others may come from international countries.

4. **Phone**: 0 or more allowed

5. **Email Address**: 0 or more allowed

6. For the registrant to successfully get added to the database, they MUST have at least 1 address, phone or email address filled out.

7. **Pass Options**: Required selection (only 1) with the All-inclusive Pass as the default; may have additional selections in the future.

8. **1 form per person**

Deliverables

1. The relational data schema designed to handle this form.

2. The SQL script used to implement the database. This script should include the statements used to create the database and some sample statements to add a new registrant and retrieve information about a registrant and their choices of parks.

US Park Service
Annual Park Pass Registration

Name

Address	
Line 1:	
Line 2:	
City:	State:
Zip Code:	Country:

Phone	
_ _ _ . _ _ _ . _ _ _ _	Cell | Home | Work | Other
_ _ _ . _ _ _ . _ _ _ _	Cell | Home | Work | Other

Email Address	
_____@_____	Personal | Work | Other
_____@_____	Personal | Work | Other

Pass Options	
All-inclusive Pass ($400)	◯
20 Park Pass ($350)	◯
10 Park Pass ($250)	◯
5 Park Pass ($150)	◯
2 Park Pass ($70)	◯
1 Park Pass ($40)	◯

A second form page (not shown) will allow the registrant to select the park name(s) desired, if NOT choosing the All-inclusive pass. This selection is done using a map selection, and you will get back a list of the park names selected.