Module 3 Capstone - National Park Weather Service

You have been asked to develop a web application for the National Park Weather Service.

The requirements for your application are listed below:

1. As a user of the system, I need the ability to view a list of all national parks from the home page.

    a. The home page should only show a picture of the park, its name, location, and a short summary,

2. As a user of the system, I need the ability select a park and view additional details about the selected park. All detail described in the Park Data Source needs to be displayed.

3. As a user of the system, once I select a park for viewing I have a way of viewing its 5-day weather forecast. Each daily forecast should provide a recommendation so that the user knows how to prepare for the weather appropriately.

    a. This may be on the same page as the park detail or on a separate page.

    b. The forecast for each park can be obtained from the Weather Forecast database table.

    c. If the daily forecast calls for snow, then tell the user to pack snowshoes.

    d. If the daily forecast calls for rain, then tell the user to pack rain gear and wear waterproof shoes.

    e. If the daily forecast calls for thunderstorms, tell the user to seek shelter and avoid hiking on exposed ridges.

    f. If the daily forecast calls for sun, tell the user to pack sunblock.

    g. If the temperature is going to exceed 75 degrees, tell the user to bring an extra gallon of water.

    h. If the difference between the high and low temperature exceeds 20 degrees, tell the user to wear breathable layers.

    i. If the temperature is going to be below 20 degrees, make sure to warn the user of the dangers of exposure to frigid temperatures.

4. As a user of the system, I need the ability to change my temperature preference to Celsius or Fahrenheit. My choice should be remembered while browsing the rest of the website.

5. As a user of the system, I need the ability to participate in the daily survey.

a. Today's survey will ask the user to vote on their favorite national park. In additional to selecting a park, they must enter values for a few required fields.

    i. E-mail address, state of residence, and physical activity level (inactive, sedentary, active, extremely active).

b. Once the survey has been submitted and permanently saved for record, the user is redirected to the survey results page where they see which park leads amongst all survey takers.

NOTES:
Think in terms of components re: the layout css/html
When writing DALs, write integration tests first

NEED TESTS:

Capstone.Tests.Integration
&
Capstone.Test.Unit sln

JSON - DB conn added
Must inject dependancies - no "new" keys/instances of DALs in controllers; can use in testing
Must use OOP
Don't spend too much time on css
Don't forget about cookie policy/sessions

Evaluated on communication and how you work together

Data Sources

Your application will have access to the following sources of data:

Daily Weather File

A daily weather table is provided to the system that provides weather forecast data for the next 5 days. The data columns are as follows:

Field	Description
Park Code	A short String that uniquely identifies a park. (see below for list of park codes)
Day	The forecast day. Today is day 1, tomorrow is day 2, etc.
Low	The expected low temperature in degrees Fahrenheit
High	The expected high temperature in degrees Fahrenheit
Forecast	The expected weather. Possible values are: sunny, partly cloudy, cloudy, rain, thunderstorms, snow

Park Data File

A park data table contains information about each park. The data columns are as follows:

Field	Description
Park Code	A short String that uniquely identifies a park. (see below for list of park codes)
Park Name	The name of the park (e.g. "Grand Canyon National Park)
State	The state in which the park is located
Acreage	The size of the park in acres
Elevation in Feet	The park's elevation above sea level (in feet)
Miles of Trail	The combined length of all hiking trails in the park
Number of Campsites	The total number of campsites available for visitors in the park
Climate	A generate description of the park's climate (e.g. "Desert")

Year Founded	The year the park joined the National Park System
Annual Visitor Count	The average number of visitors to the park on a annual basis
Quote	A famous quote related to the park
Quote Source	The person to whom the quote is attributed
Description	A description of the park
Entry Fee	The cost to enter the park in dollars. Starts with a dollar sign. (e.g. $10)
Number of Animal Species	The number of different animal species that can be found within the boundaries of the park

Park Codes

Each park has been assigned a unique park code as follows:

Park Code	Park
GNP	Glacier National Park
GCNP	Grand Canyon National Park
GTNP	Grand Teton National Park
MRNP	Mount Ranier National Park
GSMNP	Great Smoky Mountain National Park
ENP	Everglades National Park
YNP	Yellowstone National Park
YNP2	Yosemite National Park
CVNP	Cuyahoga Valley National Park
RMNP	Rocky Mountain National Park