

PROG5075: Assignment 1 – Introduction to JavaScript

Instructions

Using the **CoordVal** project from our class exercises, you will add more functionality and images to the application. This exercise requires images of the world, and its four quadrants: Northeast, Northwest, Southeast and Southwest. A set of images based on the National Geographic base map is available as an attachment below. You can use these images or create your own set. All the images should be a consistent size, reasonable to display on a standard screen.

Submission:

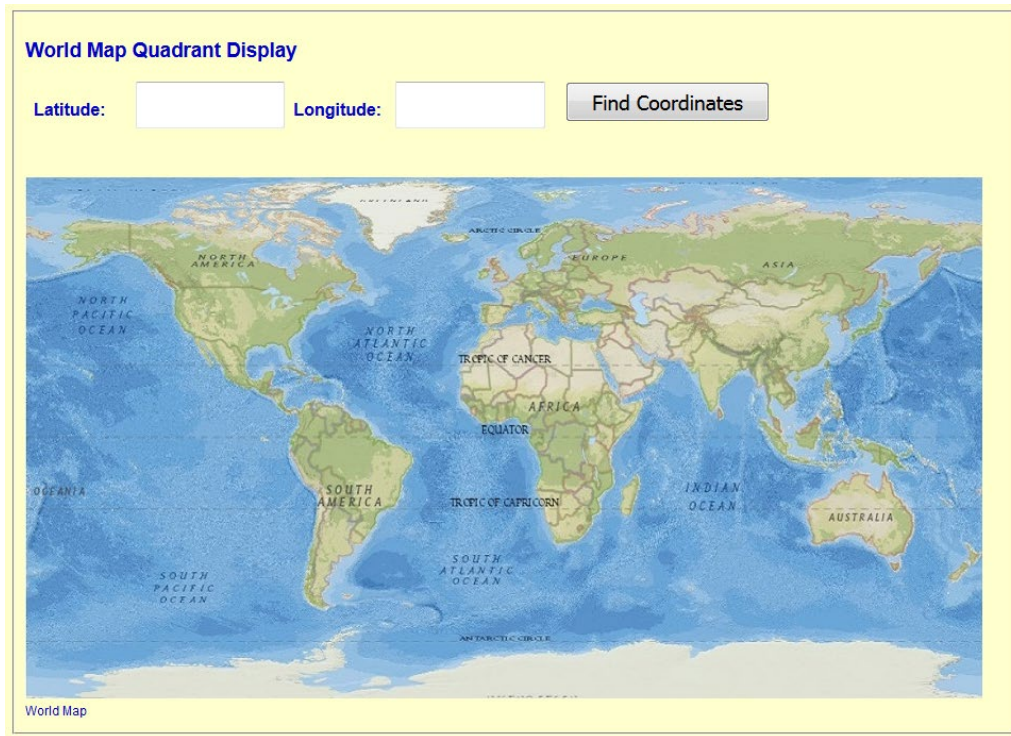
1. Submit to this assignment folder a zipped copy of your project files.
2. Test your application before submitting, to make sure it can open and function properly in other locations.

Code Considerations:

- Name functions and variables appropriately, using suitable case and format.
- Organize the functions in alphabetical order.
- Include "use strict"; for all JavaScript code.
- Include a block comment – Purpose, Author, Date – at the top of all files.
- Include a line comment for each function and additional line comments within functions for blocks of code.
- Format all pages for readability.
- Remove any commented-out code or add a comment to say why it is included.
- **NOTE: Only use syntax/code that was used in class presentations, demonstrations, and exercises.**
- Use the names of functions specified in the assignment description.
- The error messages and labels are to be placed in the same location as show in the graphics within this assignment description.
- When labels appear and disappear, the layout of the other HTML elements must not shift or move.
- The layout must be the same as the images below. You may modify page background color or font styles/colours, but the location of all elements must be the same as the layout show in the following pages.
- Latitude and longitude errors message must line up directly below their corresponding input box.
- The quadrant name label that corresponds to the current image displayed, must be updated below the image (lower left corner).

Instructions:

- Create a new HTML5 project called **CoordImg**.
- Copy the **CoordVal** project files that you completed in class exercises and place them in your new **CoordImg** project.
- Update the main html page controls to look like the example below and add a map image:



- Write a new function to update the image display, name it **updDisplay()**:
 - Pass in the Latitude and Longitude quadrants as strings.
 - Build a string that represents the name of the image file that contains the desired quadrant. For example, if sLatQuad and sLongQuad are the strings passed in to updDisplay():
 - let sMapFile = "images/" + sLatQuad + sLongQuad + ".jpg";
 - If the Quadrant is on the Equator or the Prime Meridian, display the whole world
 - Get the image element from the main html page, using its id.
 - Set the source of the image element using the filename string. For example, if the image element is stored in a variable called mapImg:
 - mapImg.src = sMapFile;
- Update **valLatLong()** to reference **updDisplay()** when new coordinates are entered:
 - For valid coordinates, call **updDisplay()** with the Lat and Long strings returned from **getLatDirection()** and **getLongDirection()** and display the appropriate quadrant. For example:

World Map Quadrant Display

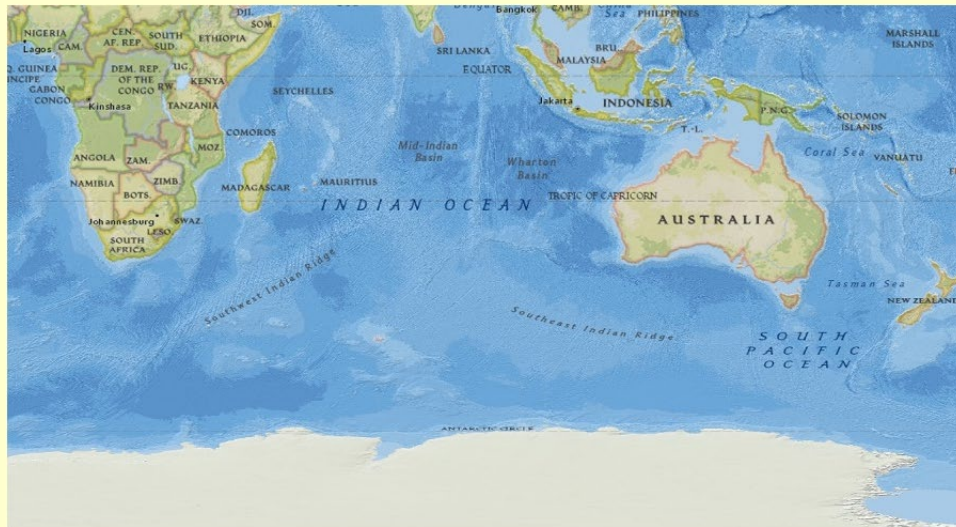
Latitude:

-20

Longitude:

30

Find Coordinates



South East

- For invalid coordinates, call **updDisplay()** with the values “Bad” and “World” (to display the alternate, dark version of the world). For example:

World Map Quadrant Display

Latitude:

-100

Longitude:

200

Find Coordinates

Latitude should be
between -90 and 90

Longitude should be
between -180 and 180

