

## KEY IN-CLASS STUDENT ACTIVITY 4.7: ACCESS DEVICE AND OPERATING SYSTEM RESOURCES

### Lesson Objective 4.7:

Access device and operating system resources.

### Resources, software, and additional files needed for this lesson:

1. Microsoft® Word and Internet access.

### Guiding questions:

1. **What is WinRT and how is it used in web development?** WinRT stands for Windows® Runtime, and it is used with Metro style apps to make it easy to use various hardware devices such as smartphones and tablets.
2. **How do mobile devices maintain and store contact lists and calendars?** Similar to an AppCache, devices have in-memory storage that is allocated for information such as contact lists and calendars.
3. **Most mobile devices have GPS components and built-in cameras. How can a web developer access and use these components?** Using the Windows Runtime, the developer can access the GPS components to provide real-time location information and navigational directions to the user. The developer can use the built-in camera for video chat (such as Skype) and video conferencing.

### Student activity:

#### Directions to the student:

Read the following scenario and create a one-page website to test the use of the geolocation API.

#### Scenario:

The web developer for Margie's Travel has an idea for a new application that will enhance the company's website. He wants to use Windows Runtime and the Windows API to create a Metro style application that allows tourists to use mobile devices with cameras and GPS devices to tag the photos they take on trips arranged by Margie's Travel. Their online photo album would showcase their travels including geolocation data.

#### Content:

1. Use this link to read about Windows Runtime design: <http://msdn.microsoft.com/en-us/library/windows/apps/hh464947.aspx>.
2. How can the web developer use the resources provided to create a photo album app that provides pictures and the location of each picture?

**Answers will vary. Use this link to see an example:** <http://msdn.microsoft.com/en-us/library/windows/apps/hh465090.aspx>