BackBase Test Challenge

Test cases to cover the CRUD operations of the application at this address; http://computer-database.herokuapp.com/computers

Requirements: None identified

Assumptions: The application should allow the user to be able to create new records, amend records, search for records and delete records from the application.

The code is correct and there are no known issues with the application i.e. The functionality works as expected. This includes any validation if present.

Other comments: Cross browser testing/mobile application testing has **not** been identified as a requirement. However manual testing will take place on Google Chrome browser and automated testing to be executed on Mozilla Firefox browser. This will cover functionality testing across commonly used browsers.

The following manual test cases will appear in this format;

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| Test Objective: This should outline the reason for the test |  |  |
| Test Id: A 3 digit unique number to identify the test. Each new test to increment by 1 (+1). | Date tested: The date the test was recored. | Tester Name: The name of the tester who executed the test. |
| Test Steps | Expected Result | Actual Result |
| 1. Steps required to be executed by manual tester | The expected result as a result of the step actioned | The actual result as a result of the step actioned.  Any recorded defects should be recorded and given an id of D\_XXX\_ZZ  Where XXX will represent the Test id and ZZ will represent the test step concerned.  General comments will be listed in this box for consideration if not obvious defects E.g. Font text of button is difficult to read. |

Create

The following tests are designed to test the functionality of creating a record.

Preconditions:

* The application is accessible
* The record does not already exist in the database
* Application code is up to date (no known errors)

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| Test Objective: Add new record to the database. |  |  |
| Test Id: 000 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Launch application by clicking link or entering the url into browser. | The database will be be successfully launched and user should see the tables with a list of computers and page heading <PAGE-HEADING> |  |
| 2. Click <Add a new computer> button | New page launched with page heading <Add a computer> and the following input fields available;   * Computer name * Introduced date * Discontinued date * Company   NOTE: Company will be a predefined list of companies to select from. |  |
| 3. Enter the following information;  Computer name = ‘Dimension’  Introduced date = ‘2015-03-01’  Discontinued date = ‘’  Company = ‘IBM’  NOTE: This is just test data and not a factual computer. | The data will be valid and the computer will be added to the database. |  |
| 4. Click <Create this computer> button | The computer will be added to the database. A confirmation message should be displayed to the user to confirm that addition of the new computer. |  |
| 5. Confirm the computer has been added by searching for the computer by it’s name in the <Filter by computer name…> field and click <Filter by name> button | The computer should appear in the table. |  |

Create Validation

The following test will test the validation of adding a new record.

Assumptions made.

* The computer name will accept alpha numeric characters
* Special characters are acceptable
* Validation for dates is as stated on screen ‘yyyy-MM-dd’ format
* Only computer name is mandatory and therefore must be complete
* Duplicate records are acceptable
* No validation is required on the selection of companies (Any/None are valid)

Preconditions:

* Site is accessible
* User has selected to add a new computer

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| Test Objective: Test that the computer name MUST be included |  |  |
| Test Id: 001 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Click <Create this computer> button | An error will be shown to the user indicating a computer name has not been provided |  |

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| Test Objective: Test that a computer name only containing numeric values can be added |  |  |
| Test Id: 002 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter the following computer name’123’ | No error shown |  |
| 2. Click <Create this computer> button | Computer will successfully be added |  |

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| Test Objective: Test that the computer name can contain special characters |  |  |
| Test Id: 003 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter the following computer name ‘$’   2. Click <Create this computer> button | The computer will be added |  |
| 1. Create a new computer with the name ‘?’   2. Click <Create this computer> button | The computer will be added |  |
| 1. Create a new computer with the name ‘!’   2. Click <Create this computer> button | The computer will be added |  |
| 1. Create a new computer with the name ‘`’   2. Click <Create this computer> button | The computer will be added |  |

NOTE: The above tests are a sample of possible special characters and not an exhaustive list.

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| Test Objective: Test that Introduced date has appropriate validation  NOTE: Include computer name to avoid any conflict in error messaging |  |  |
| Test Id: 004 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter the following Introduced date ‘20’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of incorrect date format |  |
| 1. Enter the following date ‘1 May 2015’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of incorrect date format |  |
| 1. Enter a future date (in correct format) e.g. ‘2018-01-01’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of future date |  |
| 1. Enter the following incorrect formatted date ’08-04-2017’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of incorrect date format |  |
| 1. Enter an invalid date e.g. ‘2017-02-31’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of an invalid date |  |
| 1. Enter valid date without ‘-’ separator e.g. 20170101 |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of an invalid date |  |

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| Test Objective: Test that discontinued date has appropriate validation  NOTE: Include computer name to avoid any conflict in error messaging |  |  |
| Test Id: 005 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter the following date ‘20’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of incorrect date format |  |
| 1. Enter an invalid date e.g. ‘2017-02-31’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of an invalid date |  |
| 1. Enter the following date ‘1 May 2015’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of incorrect date format |  |
| 1. Enter a future date (in correct format) e.g. ‘2018-01-01’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of future date |  |
| 1. Enter the following incorrect formatted date ’08-04-2017’ |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of incorrect date format |  |
| 1. Enter a date prior to the introduced date |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user date cannot be before the introduced date |  |
| 1. Enter valid date without ‘-’ separator e.g. 20170101 |  |  |
| 2. Click <Create this computer> button | An error should be shown informing user of an invalid date |  |

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| Test Objective: Test duplicate records can be added |  |  |
| Test Id: 006 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Select an existing record and take note of all the entered details, e.g.   Amiga 2000  01 Jan 1986  01 Jan 1990  Commodore International |  |  |
| 2. Enter the computer details that you have selected |  |  |
| 3. Click <Create this computer> button | The computer will be added |  |

Read

The following tests are designed to test the search functionality of the application.

Preconditions;

* The database is populated with records
* The application is accessible

Assumptions;

There is NO validation on search criteria.

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| Test Objective: Test that the user can search for an existing record |  |  |
| Test Id: 007 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter an existing computer name, in the filter by computer name field e.g. Amiga 2000 |  |  |
| 2. Click <Filter by name> button | Filter will successfully return a record for the required computer |  |

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| Test Objective: Test that the user can search for a record that does not exist |  |  |
| Test Id: 008 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter a computer name that does not exist e.g. ‘wonderful’ |  |  |
| 2. Click <Filter by name> button | The user will be informed there are no records for the computer name |  |

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| Test Objective: Test that the user is unable to search for computer names by date |  |  |
| Test Id: 008 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Enter a valid date as a computer name e.g. ‘2017-01-01’ |  |  |
| 2. Click <Filter by name> button | The user will be informed there are no records for the computer name |  |

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| Test Objective: Test that the user must enter a search term to filter by |  |  |
| Test Id: 009 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Do not enter any text in the field |  |  |
| 2. Click <Filter by name> button | The user will see all the existing records |  |

Update

The following tests will test that the user is able to update existing computer records.

Preconditions.

* The site is accessible
* The user is able to select an existing record from the options available in the database
* The validation for adding a new computer is the same as editing

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| Test Objective: Test that the user must include the computer name when updating a record |  |  |
| Test Id: 009 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Select an existing computer record by clicking on the computer name |  |  |
| 2. Delete the computer name |  |  |
| 3. Click <Save this computer> | An error will be shown informing the user computer name is required |  |

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| Test Objective: Test that the user can successfully update an existing record |  |  |
| Test Id: 010 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Select an existing computer record by clicking on the computer name |  |  |
| 2. Edit the computer name |  |  |
| 3. Click <Save this computer> | The computer name will be updated |  |
| 4. Search for the previous computer name to esure that it has now been changed | No computer should be found |  |
| 5. Enter the edited computer name to ensure the new name has been updated | The computer name should be found |  |

Delete

The following tests will test that the user is able to delete computer records.

Preconditions:

* Site is accessible
* The database has existing computer records

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| Test Objective: Test that the user is able to remove computer records |  |  |
| Test Id: 011 | Date tested: | Tester Name: |
| Test Steps | Expected Result | Actual Result |
| 1. Select an existing computer record by clicking on the computer name |  |  |
| 2. Delete the computer by clicking <Delete this computer> | The computer is deleted and the user is informed |  |
| 3. Search for the computer to ensure it has been removed | No record should be removed |  |

Edge Case

Possible scenario that may not be likely. User accesses a computer record to delete using the application, however an api DELETE call is made for the same computer prior to computer being deleted on the application.