| Test database operation | | | |
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| Adding & Getting & Removing one BikeRackData object | | | |
| # | Test Steps | Expected Behavior | P/F |
|  | Add one valid BikeRackData object using:  addBikeRackData(BikeRackData data) | BikeRackData object is successfully added and you are able to view it in the datastore. |  |
|  | Retrieve that added BikeRackData object from the datastore using:  getBikeRackObject(BikeRackData data) | That BikeRackData object is successfully retrieved from the datastore and its fields matches to the added BikeRackDataObject from step #1. |  |
|  | Update the added BikeRackData object from step #1 using:  updateBikeRackData(BikeRackData oldData, BikeRackData updatedData) | That BikeRackData object is successfully updated. All of its field shows the updated value. |  |
|  | Remove the added BikeRackData object from step #1 using:  removeBikeRackData(BikeRaackData data) | The BikeRackData that was added to the datastore from step #1 is successfully removed from the datastore. |  |
| Adding & Getting & Removing three BikeRackData object | | | |
|  | Add three valid BikeRackData objects using:  addBikeRackData(BikeRackData data) | All three BikeRackData objects are successfully added and you are able to view them in the datastore. |  |
|  | Retrieve the added BikeRackData objects from the datastore using:  getAllData() | That BikeRackData object is successfully retrieved from the datastore and its fields matches to the added BikeRackDataObject from step #1. |  |
|  | Update the added BikeRackData objects from step #5 using:  updateBikeRackData(BikeRackData oldData, BikeRackData updatedData) | That BikeRackData objects are successfully updated. All of their fields show the updated value. |  |
|  | Remove the added BikeRackData objects from step #1 using:  removeBikeRackData(BikeRaackData data) | The BikeRackData objects that were added to the datastore from step #5 are successfully removed from the datastore. |  |
| Test removeAll() | | | |
|  | Add three valid BikeRackData objects using:  addBikeRackData(BikeRackData data) | All three BikeRackData objects are successfully added and you are able to view them in the datastore. |  |
|  | Call:  removeAll() | All three BikeRackData objects are successfully removed from the datastore. |  |
| Update data that doesn’t exist in datastore | | | |
|  | Add three valid BikeRackData objects using:  addBikeRackData(BikeRackData data) | All three BikeRackData objects are successfully added and you are able to view them in the datastore. |  |
|  | Update a BikeRackData object that doesn’t exist in the datastore. | No visible changes can be seen in the datastore. All the added data from the previous step have not been updated. |  |
| Remove data that doesn’t exist in datastore | | | |
|  | Remove a BikeRackData object that doesn’t exist in the datastore. | No visible changes can be seen in the datastore. All the added data from the previous step have not been removed. |  |
| Handling “null” data | | | |
|  | Create a BikeRackData object where all of its fields are null, but it’s integer field contains a valid value. | The BikeRackData object is added to the database. Notice how all its field are null except for numRacks. |  |
|  | Remove that added BikeRackData object using:  removeBikeRackData(BikeRaackData data) | The BikeRackData object is not removed and still remains in the datastore. |  |
|  | Update that added BikeRackData. | That BikeRackData object is not updated in the datastore. |  |
| Operation that involves ID | | | |
|  | Add 3 new valid BikeRackData object. | The 3 new valid BikeRackData objects are successfully added to the datastore. |  |
|  | Retrieve those 3 valid BikeRackData objects from the datastore using the getAll() method and store the results in a List. | All 3 valid BikeRackData objects are successfully retrieved in the datastore. |  |
|  | For each item in the list of results, use this method:  findDataById(Long id) | All 3 valid BikeRackData objects can be successfully found from the datastore. |  |
|  | For each item in the list of results, update each item using this method:  upateDataById(BikeRackData data) | Each item is successfully updated and the changes can be seen in the datastore. |  |
|  | For each item in the list of results, remove that item using this method:  removeDataById(Long id) | Each item is successfully removed from the datastore. |  |
|  | Ensure the datastore is empty by deleting all rows. |  |  |
|  | Create a new BikeRackData object in the code. |  |  |
|  | Use this method:  findDataById(Long id)  Pass in the id of that newly created BikeRackData object from the previous step as the parameter. | That BikeRackData isn’t found in the datastore. |  |
|  | Repeat the previous step for the following methods:  updateDataById(BikeRack data)  removeDataById(Long id) | The BikeRackData is not successfully updated.  The BikeRackData isn’t removed from the datastore. |  |