

## **Lab Lab 2**

In package edu.monmouth.lab2, create the two classes described below. Only supply those attributes and methods specified-nothing more, nothing less. Constructors must not set any attributes directly. It is not required for mutators to verify any values passed in. Methods hashCode() and equals() must be consistent, using all attributes. The hashCode() method must not delegate to Objects.hash(). Use proper annotations.

Using the Lab2 class provided:

- Validate there is one and only one command line argument given. If one and only one command line argument is not supplied, print a meaningful message and terminate the application with a non-zero code. This command line argument specifies the name of the file to which standard error and standard out will be redirected.
- Redirect standard error and standard out using the method presented in class. Use proper exception handling. If any exception results, terminate the application with a non-zero code.
- Supply code that verifies hashCode() and equals() methods are consistent for both the Governor and State classes (equals() returns true, hash value must be the same and equals() returns false, hash values must differ). Do this by creating 2 or 3 State objects and Governor objects that are “equal” and “not equal”. Verify the return value from hashCode() is consistent with the return value from equals().
- Create a HashSet that can house State objects (programming to the interface)
- Insert the seven State objects to the HashSet. After attempting to insert each State object, print to stdout whether or not the object was successfully inserted.
- Iterate through the HashSet printing out each State’s attributes.
- Create a HashMap establishing an association between a State object and a Governor object. State objects will be the key, Governor objects will be the value
- Insert corresponding State and Governor objects.
- Print the number of elements in the HashMap
- Print all elements in the HashMap
- Print the governor for the state of New York
- Determine if the “newJersey” State object exists in the HashMap. If it does, print out its governor.
- Using the provided “rhodeIsland” State object determine if this State object exists in the HashMap.

Submit all source code to: [https://classroom.github.com/a/3B8t\\_mpo](https://classroom.github.com/a/3B8t_mpo)

