Rio Bacon

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Write up part 1.

1. Group members: Rio Bacon, Noah Siegel
2. Assistance received only from various websites found through google searching, including the java api.
3. The project took roughly 17 hours from each of us. The most difficult part was figuring out how to split the work, since there was so much overlap between the versions. The project could be better by making the grid system starting in version 3 more clear, as it was very difficult to understand and follow the example.
4. None
5. We tested the program by having unit tests (JUnit) for some of the crucial helper classes, and having one overall JUnit test that could be tested on any version. The overall test used a specific set of population points and queries that was carefully designed to catch as many edge cases as possible, regardless of the version.

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a. To develop the code, we first discussed the overall design of the code. Once we had something we were both satified with, we created main together, further discussing as we coded, on a lower, coding level. This took 2 to 3 hours. Then we proceeded to create version 1 and 3 of the assingment together, since they seemed to be good foundations to start on so we can divide the rest of the work, which took another 3 hours or so. As we coded 1 and 3, similar to main, we discussed the code as one of us typed, and created helper methods as necessary, making predictions on how it can be used in the later versions. We then split the other versions up, coding them individually, since at this point the entire structure of the program was clear, including helper classes and its methods. For testing, we decided as we split the work up after writing versions 1 and 3, who designs unit testing for which class, and wrote them individually, and fixed any errors that exited in the classes. The overall test case was also written by one person, but was shared for testing each version. In the end, we put all our code together, and made final changes to our code, and did some final testing, all while discussing how everything came together in the end, and whether we can do some final clean ups to the code. This took about 3 to 4 hours.

b. We build main, versions 1 and 3, and helper classes used in those two versions together.

Rio built version 2 and all test cases for helper classes that were not exclusive to versions 4 and 5. Rio also built the master test case for all the versions.

Noah built verison 3 and 4, and all tests of classes exclusive to those versions.

c. One good thing about working with a partner is that there are many instances where both people have a different idea on how to implement something, and one of them is typically better, if not the only correct solution (or both are wrong, but two is still better than one, since you could potentially merge ideas to create a correct solution). One bad thing about working

together, is that if there are disagreements on an implementation, you may waste time arguing which one is correct.