

### **Team M: Code Inspection**

- Are size and bounds checks carried out when and where necessary?
  - Yes. There are null checks to protect against calling functions on potentially null variables.
- Is there ever any mismatch between the units of an expression and those of a variable? (ex. feet to meters)
  - No. We do not use any sort of units of measure for this assignment.
- Are number variables appropriate maximum size? (int, double, etc.)
  - Yes. None of the variables are at risk of an overflow.
- Are array, buffer, table (etc.) sizes appropriate? (too little=bad, too big=bad)
  - Yes. The variable arrays, maps, and sets are dynamically sized.
- Are equality tests used on floating point numbers? (always bad)
  - No. No such floating point value conditionals are used.
- When testing for errors, could the “error condition” actually be legitimate in some cases?
  - Yes. For example, if we pull the children of a relationship, if the value is null, that is not necessarily an error since the relationship may not have had any children. We check for null values in those circumstances.
- Are exceptions declared, thrown, and handled correctly?
  - Yes. IOException is thrown if a file fails to load. There are other exceptions and they are covered with standard try-catch blocks and print statements.
- Is every function call the correct function? (not a similarly named function)
  - Yes.
- Are preconditions checked before a function call (if necessary)?
  - Yes. This is especially true when loading data from the family tree file since some fields may be empty and would therefore not need a function call. For example, if a relationship does not have parents defined, then the parents.addRelation function is not called.
- Are postconditions ensured at the time of every possible function return point?
  - Yes.
- Are files and other resources closed in all possible exits?
  - Yes.