Quiz 1  
MPP

In this Quiz, you will solve three problems in three different ways. The three problems, 1, 2, 3, are listed below. Each problem appears in the Main class in each of the packages pipeline, lambdalib, innerclass. When solving Problems 1, 2, 3 in the pipeline package, build your solutions as stream pipelines (see instructions in the code provided). When working on Problems 1, 2, 3 in the lambdalib package, provide solutions by entering an appropriate lambda expression in the LambdaLibrary class. Such an expression will be typed by some Function type (Function, BiFunction, TriFunction, etc) and will contain no hard-coded values. See instructions in Main class. To solve Problems 1, 2, 3 in the innerclass package, copy the pipeline solutions you created in the pipeline package, but replace all lambda expressions with instances of local inner classes – see the Sample solution provided in the Main class in the innerclass package.

Be sure to look carefully at each of the Sample questions provided in the three packages.

NOTE: *None of the expressions in LambdaLibrary are allowed to have hard-coded values.*

1. An Employee class has been provided for you. Create an expression which, given a list of Employees, and integers lower, upper (with lower < upper) returns a List of name/salary pairs of those Employees in the list whose salary is greater than lower but less than upper, arranged in ascending order of name and then in descending order of salary. Pairs should be realized as instances of a Pair class whose two instance variables are String name, double salary. To test your expression, use the EmployeeTestData class method getList() and apply your expression to this list, using values lower = 55000, upper = 120000. Print the result to the console.
2. You have been provided with data classes Trader and Transaction. Create an expression that finds all transactions from year 2011 and sort them by value (small to high). Apply your expression to the list in the main method. Print the result to the console.
3. You have been provided with data classes Trader and Transaction. Create an expression that finds all traders from the city of Cambridge, sorted by the name of the Trader (in ascending order). Apply your expression to the list in the main method. Print the result to the console.