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Lab 11 Report

Problem)
It was demanded to implemented generic constructors, getPair, equals, hashCode and toString methods from Pair class.

Solution)
It is not different than working with pre-defined types, the only difference is that now we are working with a generic one that will be defined in runtime. Every time we work with the local variables firstElement and secondElement of type E and other E variables passed as parameters. For the equals method we had to do something different, the first part is to check if the Object passed as parameter is an instanceOf Pair, if it is not so naturally will not be equal to the local instance that we want to compare it to. If it is so we need to check using the equals() method from the Object class. For the hashCode I also use a pre-implement method from Object class instead of determining a hash function(like multiplying for 20). The toString was basically create a way to print the values from the both local variables.
On PairUtility I use methods from a List type to get the first and the last elements and use it for creating a new instance of Pair, that will given as a return. I didn't have any problems implementing it.

Conclusion)
The application of generic types is pretty interesting for using when we don't know what kind of objects we will receive, can be Strings, Ints, Doubles, etc. It's a very powerful, important and useful approach for developers.