**Notes for the challenge:**

**Classes and method brief introduction**

**CannotReassembleException.class**

throw this exception with appropriate message when the programme cannot handle some cases(invalid input etc).

**TextOverlap.class**

Wrap overlappedString and mergedString of two Strings

**TextUtils.class**

Main utils class dealing with fragments reassemble

*reassemble()* method

This is the interface called by YuCao.class. It uses mergeFragments() method to reduce fragments number and recursively call itself until there is only one fragment

*mergeFragments()* method

Find the maximum overlap in all the fragments and merge these two fragments with maximum overlap. It returns the merged fragments as a list

*countOverlap()* method

Returns the count the overlap of two Strings

*mergeOverlap()* method

Returns the merged String of two Strings

*findOverlap()* method

Private method used by countOverlap() and mergeOverlap(). It returns a TextOverlap object which wraps overlappedString and mergedString

**Unit Tests and Code Coverage**

Used Test Driven Development approach and the main TextUtils class has 100% line and branch coverage. Please see the HTML report under /target/site/cobertura/index.html