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Design Document – Optimized Algorithm for Conjunctive Queries

# Design Document:

The program uses the main class Intersection to input two files and turn them into BufferedReader stream. In the next step this stream is handed to the class Analyzer which will read lines one by one creating instances of Storage for each line. Every storage object has two parts a String and an ArrayList of integers which the postingIDs are stored. This ArrayList has been sorted by increasing order by Collection class in Java standard Library.

In the next step Analyzer object hands instances of Storage to Intersection Algorithm which is our starting point to go through objects of storage and their Posting ID to find the intersection. The Intersection Algorithm will run the Optimized algorithm for conjunctive queries and will use the class Intersect to find the intersection of two ArrayList of Integers. The results are handed up by the Intersect to IntersectAlgorithm and eventually to the main class where they are printed.

Class Diagram