

## **Performance Chart**

<b>System</b>	<b>Precision (%)</b>	<b>Recall (%)</b>	<b>Total Search Time (s)</b>	<b>Avg Speed (s/query)</b>
Grep-based	32.717	9.39	1227.58	14.97
Index-based	56.104	27.219	0.0691	0.000843
Index-based (Using lucene)	75.243	75.243	0.4048	0.0049

It is very clear from the above metrics that index-based boolean retrieval is superior to the normal grep-based retrieval system. As we can see, the grep-based system is too slow.

The index-based system built using lucene turns out to give better results than the normal index-based system. However, it is a bit lucene-based model is slower than the normal Index-based IR system. The reason for both the aforementioned points could be because pylucene ranks the relevant documents internally before returning them, hence it gives better results but with some compromise in speed.