

Fixed Size Storage

- 1. Storage for reviews, ordered by docIDs
- 2. Storage for (docIdStart, docIdEnd), ordered by productIDs

1. Compact Review Storage

Index = docID + 1

productID(10B)	helpfulness numerator (2B)	helpfulness denominator (2B)	score (1B)
Z123456789	5	7	3 ← first document
B123456789	0	1	2 ← second document
...

2. docID pair storage

Ordered by productIDs.
Indices have no direct meaning, but can apply
binary search via productIDs

range of reviews with lowest(by
lexicographic order) productID

range of products with highest(by
lexicographic order) productID

fromDocId	toDocId	productId[10B]
200	210	A123456789
40	45	A234567890
...
170	170	Z999999999