Bronco ID: | 0 | 1 | 5 | 2 | 6 | 2 | 6 | 2 | 4 |

Last Name: Nguyen

First Name: Loc

1. Logical View of DB

Term Table	
PK	Term: text
	Num_chars: int

Index	
PFK	Term: text
	Doc_id: int
	Count: int

Documents	
PK	Doc_id: integer
	Text: text
	Title: text
	Num_chars: int
	Date: text
FK	Category_id: int

Category	
PK	id: int
	Name: text

1:N   N:1   N:1
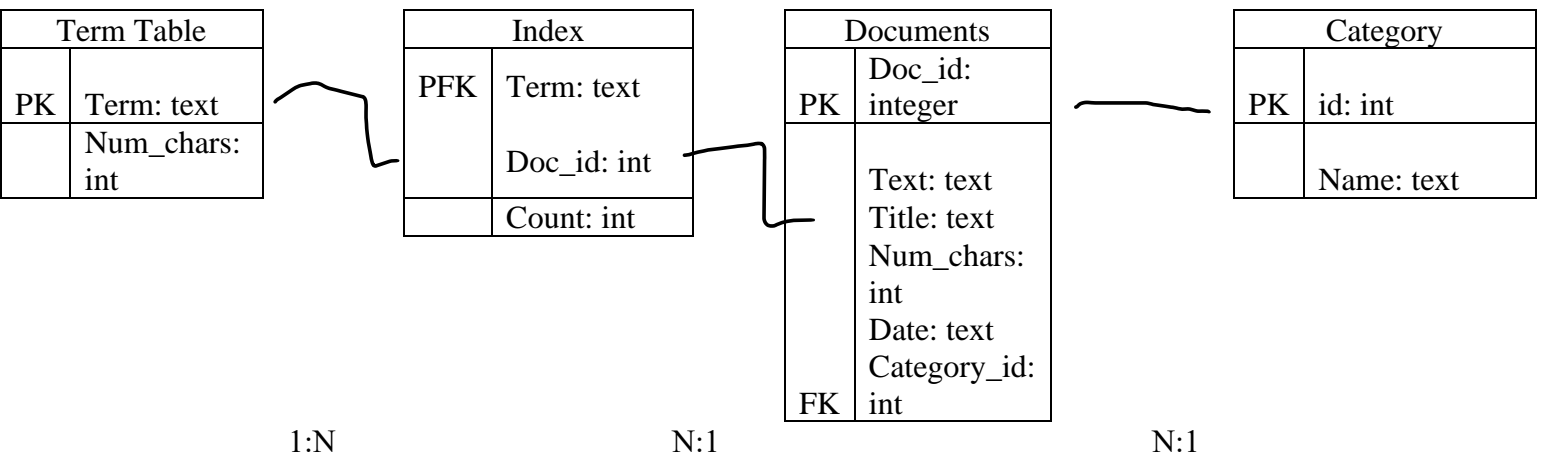
2a. SELECT COUNT(*) FROM Documents

2b. SELECT COUNT(*) FROM Documents JOIN Category ON Documents.category _id = Category.id WHERE Category.name = "Sports"

2c. SELECT DISTINCT count(Term) FROM Index

2d. SELECT COUNT(*) FROM Index JOIN Documents ON Index.Doc_id = Documents.Doc_id WHERE Documents.title = "Arizona"

2e. SELECT COUNT(*) FROM Index JOIN Documents ON Index.Doc_id = Documents.Doc_id JOIN Category ON Documents.category_id = Category.id WHERE Category.name = "Seasons"

2f. SELECT SUM(count) FROM Index WHERE term = "months"

2g. SELECT Documents.title, SUM(Index.count) FROM Index JOIN Documents ON Index.Doc_id = Documents.Doc_id HAVING MAX(SUM(Index.count)) WHERE Index.Doc_id = Documents.Doc_id

2h. SELECT Index.term, SUM(Index.count) FROM Index JOIN Documents ON Index.Doc_id = Documents.Doc_id WHERE Index.Doc_id = Documents.Doc_id HAVING MAX(SUM(Index.count))

3. https://github.com/Skyhorizon2021/CS4250/blob/master/Assignment2/db_connection.py

4. MongoDB Modeling

Document

{

"Doc_id": int

"Text": text

"Title": text

"Num-chars": int

"Date": text

"Category": text

"Index": [

{

      "term_1": text, "num_chars": int, "count": int

},

{

      "term 2": text, "num_chars": int, "count": int

}

]

}

5a. db.Documents.aggregate([{$count: "total"}])

5b. db.Documents.aggregate([{$match: {"Category": "Sport"}},{$count: "Doc_from_Sports"}])

5c. db.Documents.distinct("Index",[{$count: "distinct"}])

5d. db.Documents.aggregate([{$match:{"title": "Arizona"}},{$count: "total"}}])

5e. db.Documents.aggregate([{$match:{"Category": "Seasons"}},{$count: "total"}}])

5f. db.Documents.aggregate([{$match:{"Index": "months"}, "total":{$sum: '$count'}}])

5g. db.Documents.aggregate([{"total":$max:[{$sum: '$count'}],{$group:{"tittle": text, "total": ":$max:[{$sum: '$count'}]}])

5h. db.Documents.aggregate("Index", {"total": $max:[{$sum: '$count'}]}, {$group:{"Index"["term"]: text, "total": ": $max:[{$sum: '$count'}]}}

6.

https://github.com/Skyhorizon2021/CS4250/blob/master/Assignment2/db_connection_mongo.py