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# Data structure examples for Couchbase
# from https://blog.couchbase.com/data-structures-for-nosql-
applications-in-couchbase-7-0/

from couchbase.cluster import Cluster, ClusterOptions,
PasswordAuthenticator

CONNSTR = "couchbase://localhost"
authenticator = PasswordAuthenticator("Administrator",
"Administrator")
cluster = Cluster(CONNSTR, ClusterOptions(authenticator))
static_bucket = cluster.bucket('travel-sample')

db = static_bucket.default_collection()

# Example using scope and collection instead:
# dbscoped = cluster.bucket('travel-
sample').scope('scope1').collection('coll1')

# Direct document creation
db.upsert("docId", { "name": "tyler", "score": 11, "country": "CA" })

print(db.get("docId").content)
# '{ "name": "tyler", "score": 11, "country": "CA"}'

# Counters
db.counter("currentScore",delta=1,initial=0).value # Creates at 0,
adds 1
db.counter("currentScore").value # Adds 1

# Maps
db.map_add("tylerM","name","Tyler", create=True)
db.map_add("tylerM","country","Canada")

db.get("tylerM").content
# {'name': 'Tyler', 'country': 'Canada'}

# Lists
db.list_append("gameList","galaga",create=True)
db.list_append("gameList","tetris")
db.list_append("gameList","dungeons")

db.list_get("gameList",0)
# 'galaga'

db.get("gameList").content
# ['galaga', 'tetris', 'dungeons', 'tetris']

# Sets
db.set_add("gameList","tetris") # Trying to add tetris twice is
ignored
db.get("gameList").content

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# ['galaga', 'tetris', 'dungeons', 'horizon']

# Queues
db.queue_push("appRequests",{"updatescore":10},create=True)
db.queue_push("appRequests",{"adduser":"joe"})
db.queue_push("appRequests",{"updatescore":20})

db.get("appRequests").content
# [{'updatescore': 20}, {'adduser': 'joe'}, {'updatescore': 10}]

db.queue_pop("appRequests") # Value is returned as it is removed from
list
# {'updatescore': 10}

db.get("appRequests").content # First value is now removed
# [{'updatescore': 20}, {'adduser': 'joe'}]

# Subdocument
import couchbase.subdocument as SD

db.map_add("tylerM", "contact",
           &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;{"address":{"country":"Canada","city":"Vancouv
er"}})

country = db.lookup_in("tylerM", [SD.get("contact.address")])
country.content_as[str](0)
# '{"country': 'Canada', 'city': 'Vancouver'}"

country = db.lookup_in("tylerM", [SD.get("contact.address.country")])
country.content_as[str](0)
# 'Canada'
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