

```
In [38]: from pymongo import MongoClient
```

```
In [39]: # Privzet host in port
# client = MongoClient()
# ali eksplicitno
client = MongoClient('localhost', 27017)
print(client)
```

```
MongoClient('localhost', 27017)
```

```
In [40]: # Priklop v bazo (zbirko) test. Ustvari, ce ne obstaja.
db = client['test']
print(db)
```

```
Database(MongoClient('localhost', 27017), 'test')
```

```
In [41]: db.collection_names()
```

```
Out[41]: ['doc', 'mdbjadralec', 'rezervacija', 'coln', 'studenti', 'jadralec']
```

```
In [49]: # Ustvari zbirko in vstavi enega studenta
db.studenti.insert_one({"ime": "janko", "priimek": "novak"})
db.studenti.insert_one({"ime": "peter", "priimek": "klepec"})
db.studenti.insert_one({"ime": "janez", "priimek": "novak"})
```

```
Out[49]: <pymongo.results.InsertOneResult at 0x5535ea0>
```

```
In [48]: # Brisi zbirko
db.studenti.drop()
```

```
In [59]: for s in db.studenti.find():
        print(s)
```

```
{'ime': 'janko', 'starost': 25, 'priimek': 'novak', '_id': ObjectId('5694d87b2ed9621760e24dda')}
{'ime': 'peter', 'priimek': 'klepec', '_id': ObjectId('5694d87b2ed9621760e24ddb')}
{'ime': 'janez', 'priimek': 'novak', '_id': ObjectId('5694d87b2ed9621760e24ddc')}
```

```
In [51]: db.studenti.find_one({'priimek': "novak"})
```

```
Out[51]: {'_id': ObjectId('5694d87b2ed9621760e24dda'),
          'ime': 'janko',
          'priimek': 'novak'}
```

```
In [52]: list(db.studenti.find({'priimek': "novak"}))
```

```
Out[52]: [{'_id': ObjectId('5694d87b2ed9621760e24dda'),
          'ime': 'janko',
          'priimek': 'novak'},
          {'_id': ObjectId('5694d87b2ed9621760e24ddc'),
          'ime': 'janez',
          'priimek': 'novak'}]
```

```
In [53]: list(db.studenti.find({'priimek': {"$ne": "novak"}}))
```

```
Out[53]: [{'_id': ObjectId('5694d87b2ed9621760e24ddb'),
          'ime': 'peter',
          'priimek': 'klepec'}]
```

```
In [54]: list(db.studenti.find({'priimek': {"$in": ["novak"]}}))
```

```
Out[54]: [{'_id': ObjectId('5694d87b2ed9621760e24dda'),
          'ime': 'janko',
          'priimek': 'novak'},
          {'_id': ObjectId('5694d87b2ed9621760e24ddc'),
          'ime': 'janez',
          'priimek': 'novak'}]
```

```
In [55]: list(db.studenti.find({'priimek': {"$nin": ["novak", "kovac"]}}))
```

```
Out[55]: [{'_id': ObjectId('5694d87b2ed9621760e24ddb'),
          'ime': 'peter',
          'priimek': 'klepec'}]
```

```
In [56]: list(db.studenti.find({'ime': {"$exists": 1}}))
```

```
Out[56]: [{'_id': ObjectId('5694d87b2ed9621760e24dda'),
          'ime': 'janko',
          'priimek': 'novak'},
          {'_id': ObjectId('5694d87b2ed9621760e24ddb'),
          'ime': 'peter',
          'priimek': 'klepec'},
          {'_id': ObjectId('5694d87b2ed9621760e24ddc'),
          'ime': 'janez',
          'priimek': 'novak'}]
```

```
In [17]: list(db.studenti.find({'$or': [{'ime': 'janko'}, {'ime': 'janez'}]}))
```

```
Out[17]: [{'_id': ObjectId('5693fa0b2ed9620aacd5b8e0'),
  'ime': 'janko',
  'priimek': 'novak',
  'starost': '25'},
 {'_id': ObjectId('5693fa0b2ed9620aacd5b8e2'),
  'ime': 'janez',
  'priimek': 'novak'},
 {'_id': ObjectId('5694537e2ed9621760e24db6'),
  'ime': 'janko',
  'priimek': 'novak'},
 {'_id': ObjectId('5694537e2ed9621760e24db8'),
  'ime': 'janez',
  'priimek': 'novak'}]
```

Posodabljanje in/ali dodajanje polja

```
In [58]: db.studenti.update_one({"ime": "janko"}, {'$set' : {'starost' : 25}})
```

```
Out[58]: <pymongo.results.UpdateResult at 0x476e360>
```

```
In [60]: db.doc.insert_one( { 'ime' : "Janko",
  'priimek' : "Novak",
  'knjige' : [
    { 'avtorjev' : 3, 'strani' : 100},
    { 'avtorjev' : 5, 'strani' : 50},
    { 'avtorjev' : 8, 'strani' : 400}
  ]
} )
```

```
Out[60]: <pymongo.results.InsertOneResult at 0x5535900>
```

```
In [61]: db.doc.find_one()
```

```
Out[61]: {'_id': ObjectId('569421562ed9620aacd5b8e3'),
  'ime': 'Janko',
  'knjige': [{'avtorjev': 3, 'strani': 100},
  {'avtorjev': 5, 'strani': 50},
  {'avtorjev': 8, 'strani': 400}],
  'priimek': 'Novak'}
```

Kreiramo ne-enoličen naraščajoč indeks

```
In [62]: import pymongo
db.studenti.create_index([('priimek', pymongo.ASCENDING)], unique=False)
```

```
Out[62]: 'priimek_1'
```

Jadralci v MongoDB

```
In [63]: db.jadralec.drop()
```

```
In [64]: # Jadralci
db.jadralec.insert_one( {"jid": 22, "ime" : "Darko",      "rating": 7, "starost"
:45.0} )
db.jadralec.insert_one( {"jid": 29, "ime" : "Borut",      "rating": 1, "starost"
:33.0} )
db.jadralec.insert_one( {"jid": 31, "ime" : "Lojze",      "rating": 8, "starost"
:55.5} )
db.jadralec.insert_one( {"jid": 32, "ime" : "Andrej",     "rating": 8, "starost"
:25.5} )
db.jadralec.insert_one( {"jid": 58, "ime" : "Rajko",      "rating": 10, "starost"
:35.0} )
db.jadralec.insert_one( {"jid": 64, "ime" : "Henrik",     "rating": 7, "starost"
:35.0} )
db.jadralec.insert_one( {"jid": 71, "ime" : "Zdravko",    "rating": 10, "starost"
:16.0} )
db.jadralec.insert_one( {"jid": 74, "ime" : "Henrik",     "rating": 9, "starost"
:35.0} )
db.jadralec.insert_one( {"jid": 85, "ime" : "Anze",       "rating": 3, "starost"
:25.5} )
db.jadralec.insert_one( {"jid": 95, "ime" : "Bine",       "rating": 3, "starost"
:63.5} )
```

```
Out[64]: <pymongo.results.InsertOneResult at 0x5535d38>
```

```
In [65]: db.jadralec.create_index([('jid', pymongo.ASCENDING)], unique=True)
```

```
Out[65]: 'jid_1'
```

```
In [66]: db.coln.drop()
```

```
In [67]: db.coln.insert_one( {"cid": 101, "ime" : "Elan",      "dolzina": 34, "barv
a": "modra"} )
db.coln.insert_one( {"cid": 102, "ime" : "Elan",      "dolzina": 34, "barv
a": "rdeca"} )
db.coln.insert_one( {"cid": 103, "ime" : "Sun Odyssey", "dolzina": 37, "barv
a": "zelena"} )
db.coln.insert_one( {"cid": 104, "ime" : "Bavaria",    "dolzina": 50, "barv
a": "rdeca"} )
```

```
Out[67]: <pymongo.results.InsertOneResult at 0x5535d80>
```

```
In [68]: db.coln.create_index([('cid', pymongo.ASCENDING)], unique=True)
```

```
Out[68]: 'cid_1'
```

```
In [69]: db.rezervacija.drop()
```

```
In [70]: db.rezervacija.insert_one( {"jid": 22, "cid" : 101, "dan": "2006-10-10" } )
db.rezervacija.insert_one( {"jid": 22, "cid" : 102, "dan": "2006-10-10" } )
db.rezervacija.insert_one( {"jid": 22, "cid" : 103, "dan": "2006-10-8" } )
db.rezervacija.insert_one( {"jid": 22, "cid" : 104, "dan": "2006-10-7" } )
db.rezervacija.insert_one( {"jid": 31, "cid" : 102, "dan": "2006-11-10" } )
db.rezervacija.insert_one( {"jid": 31, "cid" : 103, "dan": "2006-11-6" } )
db.rezervacija.insert_one( {"jid": 31, "cid" : 104, "dan": "2006-11-12" } )
db.rezervacija.insert_one( {"jid": 64, "cid" : 101, "dan": "2006-9-5" } )
db.rezervacija.insert_one( {"jid": 64, "cid" : 102, "dan": "2006-9-8" } )
db.rezervacija.insert_one( {"jid": 74, "cid" : 103, "dan": "2006-9-8" } )
```

```
Out[70]: <pymongo.results.InsertOneResult at 0x55356c0>
```

```
In [71]: db.rezervacija.create_index([('cid', pymongo.ASCENDING),
                                       ('jid', pymongo.ASCENDING),
                                       ('dan', pymongo.ASCENDING)], unique=True)
```

```
Out[71]: 'cid_1_jid_1_dan_1'
```

Primer stičnega ekvivalenta

```
In [73]: # STIK: Poišči vse Darkove rezervacije
darko = db.jadralec.find_one({"ime" : "Darko"})
rez = db.rezervacija.find( {"jid" : darko["jid"]} )
#for r in rez:
#    print (r)
```

```
In [74]: list(rez)
```

```
Out[74]: [{'_id': ObjectId('5694dd0f2ed9621760e24dec'),
            'cid': 101,
            'dan': '2006-10-10',
            'jid': 22},
           {'_id': ObjectId('5694dd0f2ed9621760e24ded'),
            'cid': 102,
            'dan': '2006-10-10',
            'jid': 22},
           {'_id': ObjectId('5694dd0f2ed9621760e24dee'),
            'cid': 103,
            'dan': '2006-10-8',
            'jid': 22},
           {'_id': ObjectId('5694dd0f2ed9621760e24def'),
            'cid': 104,
            'dan': '2006-10-7',
            'jid': 22}]
```

S fleksibilno MongoDB shemo lahko strukturo poenostavimo

```
In [35]: # Darko in njegove rezervacije
db.mdbjadralec.insert_one(
    {"jid": 22, "ime" : "Darko", "rating": 7, "starost":45.0,
     "rezervacija" : [
         {"cid" : 101, "dan": "2006-10-10" },
         {"cid" : 102, "dan": "2006-10-10" },
         {"cid" : 103, "dan": "2006-10-8" },
         {"cid" : 104, "dan": "2006-10-7" }
     ]
    }
)
```

Out[35]: <pymongo.results.InsertOneResult at 0x55353f0>

```
In [36]: # Lojzetove rezervacije
db.mdbjadralec.insert_one(
    {"jid": 31, "ime" : "Lojze", "rating": 8, "starost": 55.5,
     "rezervacija" : [
         {"cid" : 102, "dan": "2006-11-10" },
         {"cid" : 103, "dan": "2006-11-6" },
         {"cid" : 104, "dan": "2006-11-12" }
     ]
    }
)
```

Out[36]: <pymongo.results.InsertOneResult at 0x5535750>

```
In [37]: list(db.mdbjadralec.find())
```

```
Out[37]: [{'_id': ObjectId('569446672ed9620aacd5b914'),
  'ime': 'Darko',
  'jid': 22,
  'rating': 7,
  'rezervacija': [{'cid': 101, 'dan': '2006-10-10'},
    {'cid': 102, 'dan': '2006-10-10'},
    {'cid': 103, 'dan': '2006-10-8'},
    {'cid': 104, 'dan': '2006-10-7'}],
  'starost': 45.0},
 {'_id': ObjectId('5694472d2ed9620aacd5b915'),
  'ime': 'Lojze',
  'jid': 31,
  'rating': 8,
  'rezervacija': [{'cid': 102, 'dan': '2006-11-10'},
    {'cid': 103, 'dan': '2006-11-6'},
    {'cid': 104, 'dan': '2006-11-12'}],
  'starost': 55.5},
 {'_id': ObjectId('569453ae2ed9621760e24dd2'),
  'ime': 'Darko',
  'jid': 22,
  'rating': 7,
  'rezervacija': [{'cid': 101, 'dan': '2006-10-10'},
    {'cid': 102, 'dan': '2006-10-10'},
    {'cid': 103, 'dan': '2006-10-8'},
    {'cid': 104, 'dan': '2006-10-7'}],
  'starost': 45.0},
 {'_id': ObjectId('569453af2ed9621760e24dd3'),
  'ime': 'Lojze',
  'jid': 31,
  'rating': 8,
  'rezervacija': [{'cid': 102, 'dan': '2006-11-10'},
    {'cid': 103, 'dan': '2006-11-6'},
    {'cid': 104, 'dan': '2006-11-12'}],
  'starost': 55.5}]
```

```
In [ ]:
```