```python
In [1]: from pathlib import Path
        import json
        import os
        from tinydb import TinyDB, Query

        current_dir = Path(os.getcwd()).absolute()
        results_dir = current_dir.joinpath('results')
        kv_data_dir = results_dir.joinpath('kvdb')
        kv_data_dir.mkdir(parents=True, exist_ok=True)

        def load_json(json_path):
            with open(json_path) as f:
                return json.load(f)

        class DocumentDB(object):
            def __init__(self, db_path):
                ## You can use the code from the previous exmaple if you would like
                people_json = kv_data_dir.joinpath('people.json')
                visited_json = kv_data_dir.joinpath('visited.json')
                sites_json = kv_data_dir.joinpath('sites.json')
                measurements_json = kv_data_dir.joinpath('measurements.json')

                self._db_path = Path(db_path)
                self._db = None

                self.people_json = load_json(people_json)
                self.visited_json = load_json(visited_json)
                self.sites_json = load_json(sites_json)
                self.measurements_json = load_json(measurements_json)
                self._load_db()

            def Merge(dict1, dict2):
                res = {**dict1, **dict2}
                return res

            def _load_db(self):
                self._db = TinyDB(self._db_path)
                data_table = self._db.table('PatientRecord')

                Q1 = Query()
                visits = []
                measurements = []
                people = []
                sites = []
                #merged_data = []

                for people_key, people_values in self.people_json.items():
                    peoples_dict = {}
                    merged_dict = {}

                    merged_dict.update(people_values)

                    for measurement_key, measurement_value in self.measurements_json.items():
                        measurements_dict = {}
                        for visit_key, visit_value in self.visited_json.items():
                            visits_dict = {}
                            if people_values['person_id'] == measurement_value['person_id']:
                                measurements_dict = measurement_value
                                if measurement_value['visit_id'] == visit_value['visit_id']:
                                    visits_dict = visit_value
                                    for site_key, site_value in self.sites_json.items():
                                        sites_dict = {}
                                        if visit_value['site_id'] == site_value['site_id']:
                                            sites = site_value
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                                        visit_values_2 = {}
                                        visit_values_2 = visits_dict

                                        if len(sites)>0:
                                            visit_values_2.update({"site": sites})
                                        if len(measurements_dict) > 0:
                                            visit_values_2.update({"measurements" : [measure
                                        merged_dict.update({"visits" : visit_values_2})
                                        data_table.insert(merged_dict)
                # Test Queries
                print('SEARCH A ROW IN TABLE \n',data_table.search(Q1.person_id == 'lake'))
                for item in data_table:
                        print('\n\n PRINT EACH ROW IN TABLE \n',item)
                print('\n\n PRINT ENTIRE TABLE \n\n',data_table.all())
```

In [2]:
```python
db_path = results_dir.joinpath('patient-info.json')
if db_path.exists():
    os.remove(db_path)

db = DocumentDB(db_path)
```

```
SEARCH A ROW IN TABLE
 [{'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits':
{'visit_id': 734, 'site_id': 'DR-3', 'visit_date': '1930-01-07', 'site': {'site_id': 'DR
-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 734, 'pers
on_id': 'lake', 'quantity': 'sal', 'reading': 0.05}]}}, {'person_id': 'lake', 'personal_
name': 'Anderson', 'family_name': 'Lake', 'visits': {'visit_id': 752, 'site_id': 'DR-3',
'visit_date': nan, 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.7
2}, 'measurements': [{'visit_id': 752, 'person_id': 'lake', 'quantity': 'rad', 'readin
g': 2.19}]}}, {'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake',
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R-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 752, 'per
son_id': 'lake', 'quantity': 'sal', 'reading': 0.09}]}}, {'person_id': 'lake', 'personal
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6.72}, 'measurements': [{'visit_id': 752, 'person_id': 'lake', 'quantity': 'temp', 'read
ing': -16.0}]}}, {'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lak
e', 'visits': {'visit_id': 837, 'site_id': 'MSK-4', 'visit_date': '1932-01-14', 'site':
{'site_id': 'MSK-4', 'latitude': -48.87, 'longitude': -123.4}, 'measurements': [{'visit_
id': 837, 'person_id': 'lake', 'quantity': 'rad', 'reading': 1.46}]}}, {'person_id': 'la
ke', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'visit_id': 837, 'si
te_id': 'MSK-4', 'visit_date': '1932-01-14', 'site': {'site_id': 'MSK-4', 'latitude': -4
8.87, 'longitude': -123.4}, 'measurements': [{'visit_id': 837, 'person_id': 'lake', 'qua
ntity': 'sal', 'reading': 0.21}]}}]


 PRINT EACH ROW IN TABLE
 {'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'vi
sit_id': 619, 'site_id': 'DR-1', 'visit_date': '1927-02-08', 'site': {'site_id': 'DR-1',
'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 619, 'person_i
d': 'dyer', 'quantity': 'rad', 'reading': 9.82}]}}


 PRINT EACH ROW IN TABLE
 {'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'vi
sit_id': 619, 'site_id': 'DR-1', 'visit_date': '1927-02-08', 'site': {'site_id': 'DR-1',
'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 619, 'person_i
d': 'dyer', 'quantity': 'sal', 'reading': 0.13}]}}


 PRINT EACH ROW IN TABLE
 {'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'vi
sit_id': 622, 'site_id': 'DR-1', 'visit_date': '1927-02-10', 'site': {'site_id': 'DR-1',
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d': 'dyer', 'quantity': 'rad', 'reading': 7.8}]}}
```

```
PRINT EACH ROW IN TABLE
{'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'vi
sit_id': 622, 'site_id': 'DR-1', 'visit_date': '1927-02-10', 'site': {'site_id': 'DR-1',
'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 622, 'person_i
d': 'dyer', 'quantity': 'sal', 'reading': 0.09}]}}


PRINT EACH ROW IN TABLE
{'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'v
isit_id': 734, 'site_id': 'DR-3', 'visit_date': '1930-01-07', 'site': {'site_id': 'DR-
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n_id': 'lake', 'quantity': 'sal', 'reading': 0.05}]}}


PRINT EACH ROW IN TABLE
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de': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 752, 'person_id': 'lak
e', 'quantity': 'rad', 'reading': 2.19}]}}


PRINT EACH ROW IN TABLE
{'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'v
isit_id': 752, 'site_id': 'DR-3', 'visit_date': nan, 'site': {'site_id': 'DR-3', 'latitu
de': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 752, 'person_id': 'lak
e', 'quantity': 'sal', 'reading': 0.09}]}}


PRINT EACH ROW IN TABLE
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isit_id': 752, 'site_id': 'DR-3', 'visit_date': nan, 'site': {'site_id': 'DR-3', 'latitu
de': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 752, 'person_id': 'lak
e', 'quantity': 'temp', 'reading': -16.0}]}}


PRINT EACH ROW IN TABLE
{'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'v
isit_id': 837, 'site_id': 'MSK-4', 'visit_date': '1932-01-14', 'site': {'site_id': 'MSK-
4', 'latitude': -48.87, 'longitude': -123.4}, 'measurements': [{'visit_id': 837, 'person
_id': 'lake', 'quantity': 'rad', 'reading': 1.46}]}}


PRINT EACH ROW IN TABLE
{'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'v
isit_id': 837, 'site_id': 'MSK-4', 'visit_date': '1932-01-14', 'site': {'site_id': 'MSK-
4', 'latitude': -48.87, 'longitude': -123.4}, 'measurements': [{'visit_id': 837, 'person
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PRINT EACH ROW IN TABLE
{'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'vis
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PRINT EACH ROW IN TABLE
{'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'vis
it_id': 734, 'site_id': 'DR-3', 'visit_date': '1930-01-07', 'site': {'site_id': 'DR-3',
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PRINT EACH ROW IN TABLE
```

{'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 735, 'site_id': 'DR-3', 'visit_date': '1930-01-12', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 735, 'person_id': 'pb', 'quantity': 'rad', 'reading': 7.22}]}}

PRINT EACH ROW IN TABLE
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PRINT EACH ROW IN TABLE
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PRINT EACH ROW IN TABLE
{'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 751, 'site_id': 'DR-3', 'visit_date': '1930-02-26', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 751, 'person_id': 'pb', 'quantity': 'rad', 'reading': 4.35}]}}

PRINT EACH ROW IN TABLE
{'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 751, 'site_id': 'DR-3', 'visit_date': '1930-02-26', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 751, 'person_id': 'pb', 'quantity': 'temp', 'reading': -18.5}]}}

PRINT EACH ROW IN TABLE
{'person_id': 'roe', 'personal_name': 'Valentina', 'family_name': 'Roerich', 'visits': {'visit_id': 752, 'site_id': 'DR-3', 'visit_date': nan, 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 752, 'person_id': 'roe', 'quantity': 'sal', 'reading': 41.6}]}}

PRINT EACH ROW IN TABLE
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PRINT EACH ROW IN TABLE
{'person_id': 'roe', 'personal_name': 'Valentina', 'family_name': 'Roerich', 'visits': {'visit_id': 844, 'site_id': 'DR-1', 'visit_date': '1932-03-22', 'site': {'site_id': 'DR-1', 'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 844, 'person_id': 'roe', 'quantity': 'rad', 'reading': 11.25}]}}

PRINT ENTIRE TABLE
[{'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'visit_id': 619, 'site_id': 'DR-1', 'visit_date': '1927-02-08', 'site': {'site_id': 'DR-1', 'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 619, 'person_id': 'dyer', 'quantity': 'rad', 'reading': 9.82}]}}, {'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'visit_id': 619, 'site_id': 'DR-1', 'visit_date': '1927-02-08', 'site': {'site_id': 'DR-1', 'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 619, 'person_id': 'dyer', 'quantity': 'sal', 'reading': 0.13}]}}, {'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'visit_id': 622, 'site_id': 'DR-1', 'visit_date': '1927-02-10', 'site':

{'site_id': 'DR-1', 'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 622, 'person_id': 'dyer', 'quantity': 'rad', 'reading': 7.8}]}}, {'person_id': 'dyer', 'personal_name': 'William', 'family_name': 'Dyer', 'visits': {'visit_id': 622, 'site_id': 'DR-1', 'visit_date': '1927-02-10', 'site': {'site_id': 'DR-1', 'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 622, 'person_id': 'dyer', 'quantity': 'sal', 'reading': 0.09}]}}, {'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'visit_id': 734, 'site_id': 'DR-3', 'visit_date': '1930-01-07', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 734, 'person_id': 'lake', 'quantity': 'sal', 'reading': 0.05}]}}, {'person_id': 'lake', 'personal_name': 'Anderson', 'family_name': 'Lake', 'visits': {'visit_id': 752, 'site_id': 'DR-3', 'visit_date': nan, 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 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'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 735, 'site_id': 'DR-3', 'visit_date': '1930-01-12', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 735, 'person_id': 'pb', 'quantity': 'rad', 'reading': 7.22}]}}, {'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 735, 'site_id': 'DR-3', 'visit_date': '1930-01-12', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 735, 'person_id': 'pb', 'quantity': 'sal', 'reading': 0.06}]}}, {'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 735, 'site_id': 'DR-3', 'visit_date': '1930-01-12', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 735, 'person_id': 'pb', 'quantity': 'temp', 'reading': -26.0}]}}, {'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 751, 'site_id': 'DR-3', 'visit_date': '1930-02-26', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 751, 'person_id': 'pb', 'quantity': 'rad', 'reading': 4.35}]}}, {'person_id': 'pb', 'personal_name': 'Frank', 'family_name': 'Pabodie', 'visits': {'visit_id': 751, 'site_id': 'DR-3', 'visit_date': '1930-02-26', 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 751, 'person_id': 'pb', 'quantity': 'temp', 'reading': -18.5}]}}, {'person_id': 'roe', 'personal_name': 'Valentina', 'family_name': 'Roerich', 'visits': {'visit_id': 752, 'site_id': 'DR-3', 'visit_date': nan, 'site': {'site_id': 'DR-3', 'latitude': -47.15, 'longitude': -126.72}, 'measurements': [{'visit_id': 752, 'person_id': 'roe', 'quantity': 'sal', 'reading': 41.6}]}}, {'person_id': 'roe', 'personal_name': 'Valentina', 'family_name': 'Roerich', 'visits': {'visit_id': 837, 'site_id': 'MSK-4', 'visit_date': '1932-01-14', 'site': {'site_id': 'MSK-4', 'latitude': -48.87, 'longitude': -123.4}, 'measurements': [{'visit_id': 837, 'person_id': 'roe', 'quantity': 'sal', 'reading': 22.5}]}}, {'person_id': 'roe', 'personal_name': 'Valentina', 'family_name': 'Roerich', 'visits': {'visit_id': 844, 'site_id': 'DR-1', 'visit_date': '1932-03-22', 'site': {'site_id': 'DR-1', 'latitude': -49.85, 'longitude': -128.57}, 'measurements': [{'visit_id': 844, 'person_id': 'roe', 'quantity': 'rad', 'reading': 11.25}]}}]