UNI: qz2306 Name: Qi Zheng COMS4111

Primary key:

People: playerID

Managers: playerID, teamID, yearID, inseason

Appearances: yearID, teamID, playerID Batting: playerID, yearID, teamID, stint

Fielding: playerID, yearID, teamID, stint, POS

Teams: yearID, teamID

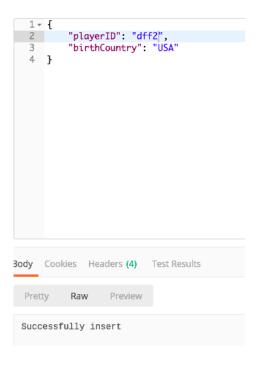
PART 1

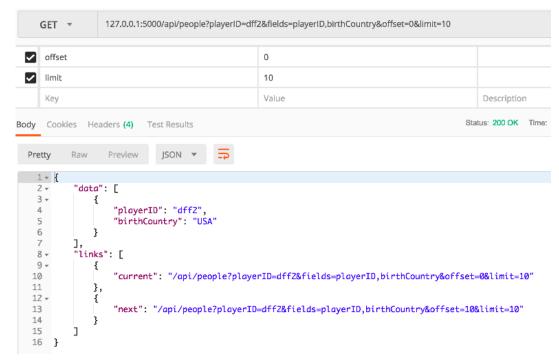
Paths

- Base resource (collection)
 - POST: /api/<resource> creates (inserts) a new sub-resource (row) in the containing resource (table).

Example:

POST: 127.0.0.1:5000/api/people





GET: /api/<resource>[query_expression],[&field_expression]

Example:

GET:127.0.0.1:5000/api/people?nameLast=Williams&nameFirst=Ted&fields=playerID,birthCountry

Result:

- Specific resource (collection element)
 - GET: /api/<resource>/<primary_key>[?fields_expression] returns the identified resource (row).

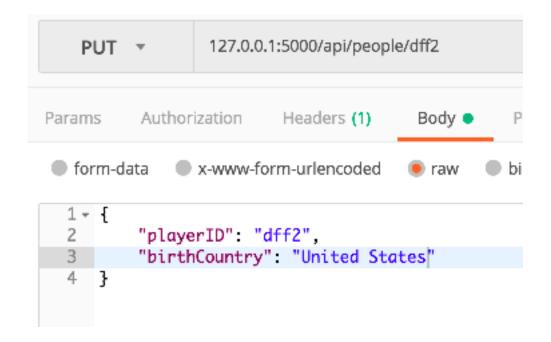
Example:

GET: 127.0.0.1:5000/api/people/willite01

```
8
                 "birthCountry": "USA",
9
                 "birthState": "CA",
                 "birthCity": "San Diego",
10
                 "deathYear": "2002",
11
                 "deathMonth": "7",
12
13
                 "deathDay": "5",
                 "deathCountry": "USA",
14
                 "deathState": "FL",
15
                 "deathCity": "Inverness",
16
17
                 "nameFirst": "Ted",
                 "nameLast": "Williams",
18
19
                 "nameGiven": "Theodore Samuel",
20
                 "weight": "205",
21
                 "height": "75",
22
                 "bats": "L",
23
                 "throws": "R",
                 "debut": "1939-04-20",
24
25
                 "finalGame": "1960-09-28",
26
                 "retroID": "willt103",
27
                 "bbrefID": "willite01"
28
        ],
"links": [
29
30 -
31 +
            {
32
                 "current": "/api/people/willite01"
33
            },
34 +
            {
35
                 "next": "/api/people/willite01?offset=10&limit=10"
36
            }
37
```

o PUT: /api/<resource>/<primary_key> updates the resource (row).

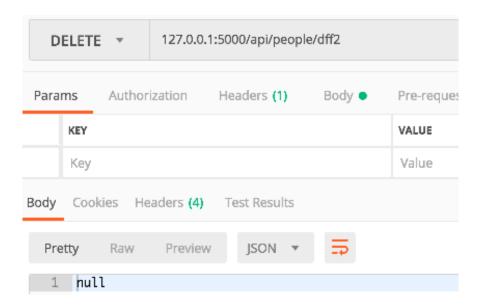
Example:



```
1 + [
2 +
                                                                                                   Search for
         "data": [
 3 +
             {
                  "playerID": "dff2",
"birthCountry": "United States"
 4
 5
 6
        ],
"links": [
 7
 8 +
 9+
             {
                  "current": "/api/people?playerID=dff2&fields=playerID,birthCountry&offset=0&limit=10"
10
             },
{
11
12 -
13
                  "next": "/api/people?playerID=dff2&fields=playerID,birthCountry&offset=10&limit=10"
14
15
         ]
16 }
```

DELETE: /api/<resource>/<primary_key> deletes the identified resource.

Example:



```
"data": [
             "playerID": "dff2",
"yearID": "2018",
             "stint": "1",
"teamID": "Columnbia",
             "lgID": "null_block",
            "G": "null_block",
"AB": "null_block",
"R": "null_block",
             "H": "null_block",
"2B": "null_block",
            "3B": "null_block",
"HR": "null_block",
"RBI": "null_block",
"SB": "null_block",
             "CS": "null_block",
             "BB": "null_block",
            "SO": "null_block",
"IBB": "null_block",
"HBP": "null_block",
             "SH": "null_block",
             "SF": "null_block",
             "GIDP": "null_block"
],
"links": [
             "current": "/api/batting?playerID=dff2"
      },
       {
             "nove". "/ani/hattina?nlavanTD dff?@affcat 100limit 10"
```

- Dependent resource/related resources:
 - o GET:

/api/<resource>/<primary_key>/<related_resource>[query_expression][fie lds_expression] returns the set of resource related to a specific resource by a relationship, and which match a query.

Example:

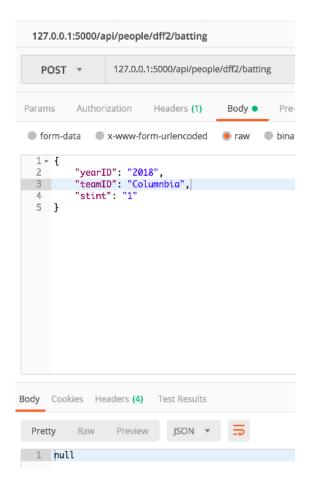
GET: 127.0.0.1:5000/api/people/willite01/batting

```
"stint": "1",
           "teamID": "BOS",
           "lgID": "AL",
           "G": "148",
           "AB": "531",
           "R": "109",
           "H": "169",
"2B": "28",
"3B": "4",
"HR": "30",
           "RBI": "126",
           "SB": "1",
           "CS": "1",
"BB": "144",
"SO": "45",
"IBB": "",
           "HBP": "0",
           "SH": "0",
"SF": "",
"GIDP": "10"
],
"links": [
      {
           "current": "/api/people/willite01/batting"
     },
      {
           "next": "/api/people/willite01/batting?offset=10&limit=10"
     }
]
```

```
"stint": "1",
                  "teamID": "BOS",
                  "lgID": "AL",
                 "G": "113",
"AB": "310",
"R": "56",
"H": "98",
"2B": "15",
                  "3B": "0",
                  "HR": "29",
                  "RBI": "72",
"SB": "1",
"CS": "1",
"BB": "75",
"S0": "41",
                  "IBB": "7",
"HBP": "3",
                  "SH": "0",
"SF": "2",
"GIDP": "7"
            }
      ],
"links": [
            {
                  "current": "/api/people/willite01/batting?offset=10&limit=10"
            },
{
                  "next": "/api/people/willite01/batting?offset=20&limit=10"
      ]
3
```

 POST: /api/<resource>/<primary_key>/<related_resource> creates a new related resource.

Example:



```
1 + {
2 +
3 +
          "data": [
              {
                   "playerID": "dff2",
"yearID": "2018",
"teamID": "Columnbia",
"stint": "1"
 4
 5
 6
 8
              }
 9
         ],
"links": [
10 +
11 +
12
              {
                    "current": "/api/batting?playerID=dff2&fields=playerID,yearID,teamID,stint&offset=0&limit=10"
13
              },
14 -
               {
                    "next": "/api/batting?playerID=dff2&fields=playerID,yearID,teamID,stint&offset=10&limit=10"
15
16
              }
          ]
17
18 }
```

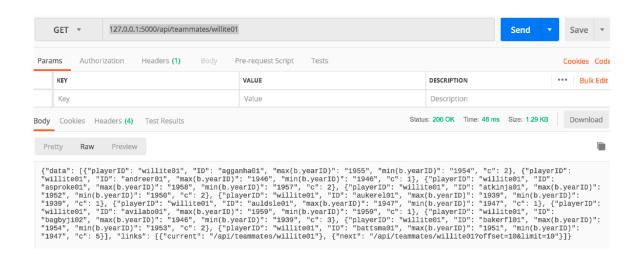
Part 2

Custom Queries

 GET: /api/teammates/<playerid> will return the IDs, names, first year, last year and count of seasons as teammates for every player that was a teammate of playerid on any team in any season. The first few elements in the response to /api/teammates/willite01 would be something like

Example:

GET: 127.0.0.1:5000/api/teammates/willite01



```
• [{]
•
       "data": [
            {
                "playerID": "willite01",
                "ID": "agganha01",
"max(b.yearID)": "1955",
                "min(b.yearID)": "1954",
                "c": 2
           },
                "playerID": "willite01",
                "ID": "andreer01",
                "max(b.yearID)": "1946",
                "min(b.yearID)": "1946",
                "c": 1
           },
                "playerID": "willite01",
                "ID": "asproke01",
"max(b.yearID)": "1958",
                "min(b.yearID)": "1957",
                "c": 2
           },
                "playerID": "willite01",
                "ID": "atkinja01",
"max(b.yearID)": "1952",
                "min(b.yearID)": "1950",
                 "c": 2
           },
            {
```

 /api/people/<playerid>/career_stats returns a summary of the career stats for a player. An example for Ted Williams might have the following data.

Example:

GET: 127.0.0.1:5000/api/people/willite01/career_stats

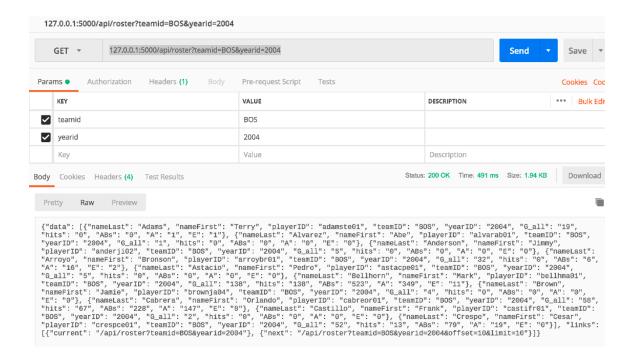
```
{"data": [{"playerID": "willite01", "teamID": "BOS", "yearID": "1939", "G_all": "149", "hits": 185.0, "ABS": 565.0, "A": "11", "E": "19"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1940", "G_all": "144", "hits": 193.0, "ABS": 561.0, "A": "13", "E": "13"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1940", "G_all": "144", "hits": 193.0, "ABS": 561.0, "A": "2", "E": "0"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1940", "G_all": "143", "hits": 185.0, "ABS": 561.0, "A": "11", "E": "11"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1942", "G_all": "150", "hits": 186.0, "ABS": 522.0, "A": "15", "E": "4"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1942", "G_all": "150", "hits": 186.0, "ABS": 522.0, "A": "15", "E": "4"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1947", "G_all": "150", "hits": 181.0, "ABS": 522.0, "A": "10", "E": "9"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1947", "G_all": "156", "hits": 181.0, "ABS": 528.0, "A": "10", "E": "9"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1948", "G_all": "156", "hits": 181.0, "ABS": 560.0, "A": "10", "E": "9"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1948", "G_all": "156", "hits": 181.0, "ABS": 560.0, "A": "10", "E": "9"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1949", "G_all": "155", "hits": 181.0, "ABS": 560.0, "A": "12", "E": "6"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1950", "G_all": "155", "hits": 181.0, "ABS": 341.0, "A": "12", "E": "6"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1950", "G_all": "155", "hits": 181.0, "ABS": 341.0, "A": "12", "E": "8"}, ("playerID": "willite01", "teamID": "BOS", "yearID": "1950", "G_all": "89", "hits": 106.0, "ABS": 334.0, "A": "7", "E": "8"}, ("playerID": "/playerID": "/playerID
```

```
},
              "playerID": "willite01",
              "teamID": "BOS",
              "yearID": "1949",
              "G_all": "155",
              "hits": 194,
              "ABs": 566,
              "A": "12",
              "E": "6"
          },
              "playerID": "willite01",
              "teamID": "BOS",
              "yearID": "1950",
              "G_all": "89",
              "hits": 106,
              "ABs": 334,
              "A": "7",
              "E": "8"
          }
      "links": [
          {
              "current": "/api/people/willite01/career_stats"
          },
          {
              "next": "/api/people/willite01/career_stats?offset=10&limit=10"
          }
     ]
}
```

 GET /api/roster?teamid=<teamid>&yearid=<yearid> returns the roster and stats for a team in a year.

Example:

GET: 127.0.0.1:5000/api/roster?teamid=BOS&yearid=2004



```
"playerID": "castifr01",
                      "playerID": "cast"
"teamID": "BOS",
"yearID": "2004",
"G_all": "2",
"hits": "0",
"ABs": "0",
"A": "0",
"E": "0"
3
ŀ
3
7
3
)
)
                },
. +
                      "nameLast": "Crespo",
2
                      "nameFirst": "Cesar",
3
                      "playerID": "crespce01",
1
                      "teamID": "BOS",
"yearID": "2004",
                      "G_all": "52",
"hits": "13",
"ABs": "79",
7
3
3
                      "A": "19",
"E": "0"
)
L
2
                }
         ],
"links": [
3
+
5 +
                {
                      "current": "/api/roster?teamid=BOS&yearid=2004"
7
                },
3 +
                {
                      "next": "/api/roster?teamid=BOS&yearid=2004&offset=10&limit=10"
)
)
                }
          ]
? }
```