

In [13]:

1	test_templates()
---	------------------

```
*****
```

```
Test name = Test2
```

```
Template = {'birthMonth': '9', 'nameLast': 'Williams'}
```

```
Fields = ['nameLast', 'nameFirst', 'birthMonth', 'birthYear']
```

```
Result table:
```

```
[
  {
    "nameLast": "Williams",
    "nameFirst": "Bernie",
    "birthMonth": "9",
    "birthYear": "1968"
  },
  {
    "nameLast": "Williams",
    "nameFirst": "Don",
    "birthMonth": "9",
    "birthYear": "1931"
  },
  {
    "nameLast": "Williams",
    "nameFirst": "Don",
    "birthMonth": "9",
    "birthYear": "1935"
  },
  {
    "nameLast": "Williams",
    "nameFirst": "Nick",
    "birthMonth": "9",
    "birthYear": "1993"
  },
  {
    "nameLast": "Williams",
    "nameFirst": "Randy",
    "birthMonth": "9",
    "birthYear": "1975"
  },
  {
    "nameLast": "Williams",
    "nameFirst": "Stan",
    "birthMonth": "9",
    "birthYear": "1936"
  }
]
```

```
*****
```

```
Test name = Test3
```

```
Template = {'nameFirst': 'Ted', 'nameLast': 'Williams'}
```

```
Fields = ['nameLast', 'nameFirst', 'birthMonth', 'birthYear']
```

```
Result table:
```

```
[
  {
```

```

    "nameLast": "Williams",
    "nameFirst": "Ted",
    "birthMonth": "8",
    "birthYear": "1918"
  }
]

```

```

*****

```

```

Test name = Test4
Template = {'nameFirst': 'Ted', 'nameLast': 'Williams'}
Fields = ['nameLast', 'nameFirst', 'birthMonth', 'birthYear']
Exception = The key_columns doesn't match the database columns type

```

```

*****

```

```

Test name = Test5
Template = {'playerID': 'willite01'}
Fields = ['playerID', 'yearID', 'teamID', 'AB', 'H', 'HR']
Result table:

```

```

[
  {
    "playerID": "willite01",
    "yearID": "1939",
    "teamID": "BOS",
    "AB": "565",
    "H": "185",
    "HR": "31"
  },
  {
    "playerID": "willite01",
    "yearID": "1940",
    "teamID": "BOS",
    "AB": "561",
    "H": "193",
    "HR": "23"
  },
  {
    "playerID": "willite01",
    "yearID": "1941",
    "teamID": "BOS",
    "AB": "456",
    "H": "185",
    "HR": "37"
  },
  {
    "playerID": "willite01",
    "yearID": "1942",
    "teamID": "BOS",
    "AB": "522",
    "H": "186",
    "HR": "36"
  },
  {
    "playerID": "willite01",
    "yearID": "1946",
    "teamID": "BOS",

```

```
"AB": "514",
"H": "176",
"HR": "38"
},
{
  "playerID": "willite01",
  "yearID": "1947",
  "teamID": "BOS",
  "AB": "528",
  "H": "181",
  "HR": "32"
},
{
  "playerID": "willite01",
  "yearID": "1948",
  "teamID": "BOS",
  "AB": "509",
  "H": "188",
  "HR": "25"
},
{
  "playerID": "willite01",
  "yearID": "1949",
  "teamID": "BOS",
  "AB": "566",
  "H": "194",
  "HR": "43"
},
{
  "playerID": "willite01",
  "yearID": "1950",
  "teamID": "BOS",
  "AB": "334",
  "H": "106",
  "HR": "28"
},
{
  "playerID": "willite01",
  "yearID": "1951",
  "teamID": "BOS",
  "AB": "531",
  "H": "169",
  "HR": "30"
},
{
  "playerID": "willite01",
  "yearID": "1952",
  "teamID": "BOS",
  "AB": "10",
  "H": "4",
  "HR": "1"
},
{
  "playerID": "willite01",
  "yearID": "1953",
  "teamID": "BOS",
  "AB": "91",
```

```
"H": "37",
"HR": "13"
},
{
  "playerID": "willite01",
  "yearID": "1954",
  "teamID": "BOS",
  "AB": "386",
  "H": "133",
  "HR": "29"
},
{
  "playerID": "willite01",
  "yearID": "1955",
  "teamID": "BOS",
  "AB": "320",
  "H": "114",
  "HR": "28"
},
{
  "playerID": "willite01",
  "yearID": "1956",
  "teamID": "BOS",
  "AB": "400",
  "H": "138",
  "HR": "24"
},
{
  "playerID": "willite01",
  "yearID": "1957",
  "teamID": "BOS",
  "AB": "420",
  "H": "163",
  "HR": "38"
},
{
  "playerID": "willite01",
  "yearID": "1958",
  "teamID": "BOS",
  "AB": "411",
  "H": "135",
  "HR": "26"
},
{
  "playerID": "willite01",
  "yearID": "1959",
  "teamID": "BOS",
  "AB": "272",
  "H": "69",
  "HR": "10"
},
{
  "playerID": "willite01",
  "yearID": "1960",
  "teamID": "BOS",
  "AB": "310",
  "H": "98",
```

```
    "HR": "29"  
  }  
]
```

```
*****
```

```
Test name = Test6  
Template = {'playerID': 'willite01', 'iq': 100}  
Fields = ['playerID', 'yearID', 'teamID', 'AB', 'H', 'HR']  
Exception = Keys in templated doesn't match the database column types
```

```
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```

```
Test name = Test7  
Template = {'playerID': 'willite01', 'yearID': '1961'}  
Fields = ['playerID', 'yearID', 'teamID', 'AB', 'H', 'HR']  
Result table:  
[]
```

```
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```

```
Test name = Test7  
Template = {'playerID': 'willite01', 'yearID': '1960'}  
Fields = ['playerID', 'yearID', 'teamID', 'AB', 'H', 'HR', 'Age']  
Exception = The fields don't match the database column types
```

```
In [17]: 1 test_find_by_primary_key()
```

```
*****  
Test name = Primary Key Test1  
Primary key = ['dff_chi']  
Result table:  
[]
```

```
*****  
Test name = Primary Key Test2  
Primary key = ['abbotji01']  
Result table:  
[  
  {  
    "playerID": "abbotji01",  
    "birthYear": "1967",  
    "birthMonth": "9",  
    "birthDay": "19",  
    "birthCountry": "USA",  
    "birthState": "MI",  
    "birthCity": "Flint",  
    "deathYear": "",  
    "deathMonth": "",  
    "deathDay": "",  
    "deathCountry": "",  
    "deathState": "",  
    "deathCity": "",  
    "nameFirst": "Jim",  
    "nameLast": "Abbott",  
    "nameGiven": "James Anthony",  
    "weight": "200",  
    "height": 75,  
    "bats": "L",  
    "throws": "L",  
    "debut": "1989-04-08",  
    "finalGame": "1999-07-21",  
    "retroID": "abboj001",  
    "bbrefID": "abbotji01"  
  }  
]
```

In [14]:

1	test_inserts()
---	----------------

```
*****
```

```
Test name = Insert Test 1
```

```
Row to insert = {'playerID': 'dff1', 'nameLast': 'Ferguson', 'nameFirst': 'Donald'}
```

```
Result table:
```

```
null
```

```
*****
```

```
Test name = Find after insert 1
```

```
Template = {'nameLast': 'Ferguson'}
```

```
Fields = ['nameLast', 'nameFirst', 'birthMonth', 'birthYear']
```

```
Result table:
```

```
[
  {
    "nameLast": "Ferguson",
    "nameFirst": "Donald",
    "birthMonth": null,
    "birthYear": null
  },
  {
    "nameLast": "Ferguson",
    "nameFirst": "Donald",
    "birthMonth": null,
    "birthYear": null
  }
]
```

```
*****
```

```
Test name = Insert Test 2
```

```
Row to insert = {'playerID': 'dff1', 'nameLast': 'Ferguson', 'nameFirst': 'Donald'}
```

```
Exception = Duplicated Primary key found, Not insert!
```

```
OK. Did not insert duplicate key.
```

```
*****
```

```
Test name = Insert Test 3
```

```
Row to insert = {'playerID': 'dff1', 'teamID': 'BOS', 'yearID': '2018', 'stint': '1',
'AB': '100', 'H': '100'}
```

```
Result table:
```

```
null
```

```
*****
```

```
Test name = Find after insert 3
```

```
Template = {'playerID': 'dff1'}
```

```
Fields = None
```

```
Result table:
```

```
[
  {
    "playerID": "dff1",
    "yearID": "2018",
```

```

    "stint": "1",
    "teamID": "BOS",
    "lgID": null,
    "G": null,
    "AB": "100",
    "R": null,
    "H": "100",
    "2B": null,
    "3B": null,
    "HR": null,
    "RBI": null,
    "SB": null,
    "CS": null,
    "BB": null,
    "SO": null,
    "IBB": null,
    "HBP": null,
    "SH": null,
    "SF": null,
    "GIDP": null
  }
]

```

In [15]:

1	test_deletes()
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\*\*\*\*\*

Test name = Delete Test 1

Template to delete = {'playerID': 'dff1', 'nameLast': 'Ferguson', 'nameFirst': 'Donald'}

\*\*\*\*\*

Test name = Delete Test 1

Template to delete = {'playerID': 'dff2', 'nameLast': 'Ferguson', 'nameFirst': 'Donald'}

OK. Did not delete the data which in not in the CSV FILE.