EXP NO:6 **Roll No: 210701162**

Import a JSON file from the command line. Apply the following actions with the data present in the JSON file where, projection, aggregation, remove, count, limit, skip and sort

AIM:

To import a JSON file from the command line and apply the following actions with the data present in the JSON file where, projection, aggregation, remove, count, limit, skip and sort using jq tool.

PROCEDURE:

1. Create a json file ‘employees.json’ and provide data in it.
2. Open the command prompt.
3. Navigate to the folder where employees.json is stored.
4. Load and view the JSON data with jq.
5. Use the jq commands for projection, aggregation, removal, counting, limiting, and sorting operations.

employees.json:

```
[
  {
    "id": 1,
    "name": "Alice Johnson",
    "department": "Engineering",
    "age": 29,
    "salary": 70000
  },
  {
    "id": 2,
    "name": "Bob Smith",
    "department": "Marketing",
    "age": 35,
    "salary": 55000
  },
  {
```

```
        "id": 3,
        "name": "Charlie Davis",
        "department": "Engineering",

        "age": 25,
        "salary": 60000
    },
    {
        "id": 4,
        "name": "Dana Lee",
        "department": "Human Resources",
        "age": 40,
        "salary": 65000
    },
    {
        "id": 5,
        "name": "Eve Martinez",
        "department": "Finance",
        "age": 45,
        "salary": 75000
    }
]
```

OUTPUT:

Installation of jq packages:

```
PS C:\WINDOWS\system32> choco install jq
Chocolatey v2.3.0
Installing the following packages:
jq
By installing, you accept licenses for the packages.
Downloading package from source 'https://community.chocolatey.org/api/v2/'
Progress: Downloading jq 1.7.1... 100%

jq v1.7.1 [Approved]
jq package files install completed. Performing other installation steps.
The package jq wants to run 'chocolateyinstall.ps1'.
Note: If you don't run this script, the installation will fail.
Note: To confirm automatically next time, use '-y' or consider:
choco feature enable -n allowGlobalConfirmation
Do you want to run the script?([Y]es/[A]ll - yes to all/[N]o/[P]rint): Y

Downloading jq 64 bit
  from 'https://github.com/jqlang/jq/releases/download/jq-1.7.1/jq-windows-amd64.exe'
Progress: 100% - Completed download of C:\ProgramData\chocolatey\lib\jq\tools\jq.exe (962 KB).
Download of jq.exe (962 KB) completed.
Hashes match.
C:\ProgramData\chocolatey\lib\jq\tools\jq.exe
Environment Vars (like PATH) have changed. Close/reopen your shell to
 see the changes (or in powershell/cmd.exe just type 'refreshenv').
 ShimGen has successfully created a shim for jq.exe
 The install of jq was successful.
  Software install location not explicitly set, it could be in package or
  default install location of installer.

Chocolatey installed 1/1 packages.
 See the log for details (C:\ProgramData\chocolatey\logs\chocolatey.log).
```

```
PS C:\WINDOWS\system32> jq --version
jq-1.7.1
PS C:\WINDOWS\system32> _
```

Running jq queries:

I. Projection:

jq ".[] | {name: .name, salary: .salary}" Desktop/employees.json

```
C:\Users\user>jq ".[] | {name: .name, salary: .salary}" Desktop/employees.json
{
  "name": "Alice Johnson",
  "salary": 70000
}
{
  "name": "Bob Smith",
  "salary": 55000
}
{
  "name": "Charlie Davis",
  "salary": 60000
}
{
  "name": "Dana Lee",
  "salary": 65000
}
{
  "name": "Eve Martinez",
  "salary": 75000
}
```

II. Aggregation:

jq "[.[] | .salary] | add" Desktop/employees.json

```
C:\Users\user>jq "[.[] | .salary] | add" Desktop/employees.json
325000
```

III. Remove:

jq "del(.[] | .age)" Desktop/employees.json

```
C:\Users\user>jq "del(.[] | .age)" Desktop/employees.json
[
  {
    "id": 1,
    "name": "Alice Johnson",
    "department": "Engineering",
    "salary": 70000
  },
  {
    "id": 2,
    "name": "Bob Smith",
    "department": "Marketing",
    "salary": 55000
  },
  {
    "id": 3,
    "name": "Charlie Davis",
    "department": "Engineering",
    "salary": 60000
  },
  {
    "id": 4,
    "name": "Dana Lee",
    "department": "Human Resources",
    "salary": 65000
  },
  {
    "id": 5,
    "name": "Eve Martinez",
    "department": "Finance",
    "salary": 75000
  }
]
```

IV. Count:

jq ". | length" Desktop/employees.json

```
C:\Users\user>jq ". | length" Desktop/employees.json
5
```

V. Limit:

jq ".[0:3]" Desktop/employees.json

```
C:\Users\user>jq ".[0:3]" Desktop/employees.json
[
  {
    "id": 1,
    "name": "Alice Johnson",
    "department": "Engineering",
    "age": 29,
    "salary": 70000
  },
  {
    "id": 2,
    "name": "Bob Smith",
    "department": "Marketing",
    "age": 35,
    "salary": 55000
  },
  {
    "id": 3,
    "name": "Charlie Davis",
    "department": "Engineering",
    "age": 25,
    "salary": 60000
  }
]
```

VI. Skip:

jq ".[2:]" Desktop/employees.json

```
C:\Users\user>jq ".[2:]" Desktop/employees.json
[
  {
    "id": 3,
    "name": "Charlie Davis",
    "department": "Engineering",
    "age": 25,
    "salary": 60000
  },
  {
    "id": 4,
    "name": "Dana Lee",
    "department": "Human Resources",
    "age": 40,
    "salary": 65000
  },
  {
    "id": 5,
    "name": "Eve Martinez",
    "department": "Finance",
    "age": 45,
    "salary": 75000
  }
]
```

VII. Sort:

jq "sort_by(.age)" Desktop/employees.json

```
C:\Users\user>jq "sort_by(.age)" Desktop/employees.json
[
  {
    "id": 3,
    "name": "Charlie Davis",
    "department": "Engineering",
    "age": 25,
    "salary": 60000
  },
  {
    "id": 1,
    "name": "Alice Johnson",
    "department": "Engineering",
    "age": 29,
    "salary": 70000
  },
  {
    "id": 2,
    "name": "Bob Smith",
    "department": "Marketing",
    "age": 35,
    "salary": 55000
  },
  {
    "id": 4,
    "name": "Dana Lee",
    "department": "Human Resources",
    "age": 40,
    "salary": 65000
  },
  {
    "id": 5,
    "name": "Eve Martinez",
    "department": "Finance",
    "age": 45,
    "salary": 75000
  }
]
```

RESULT:

Thus to import a JSON file from the command line and apply the following actions with the data present in the JSON file where, projection, aggregation, remove, count, limit, skip and sort using jq tool is completed successfully.