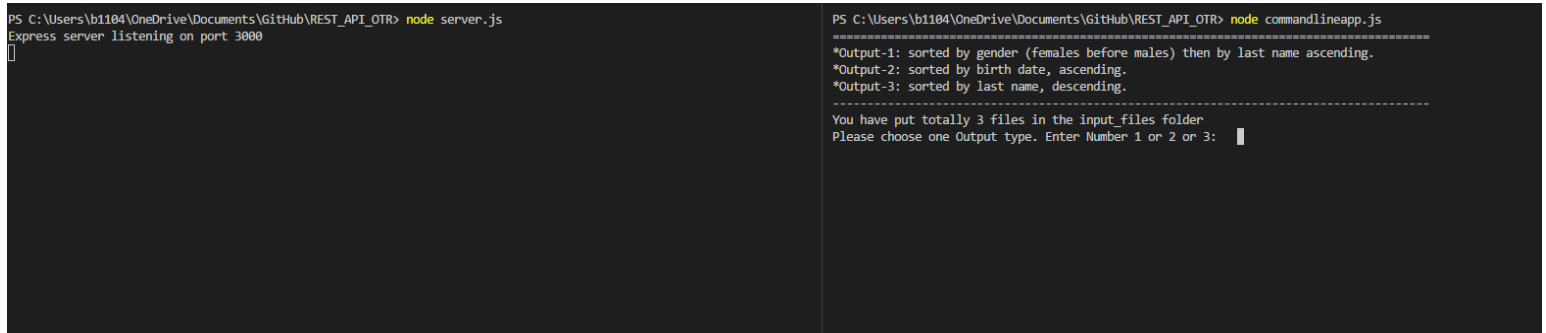
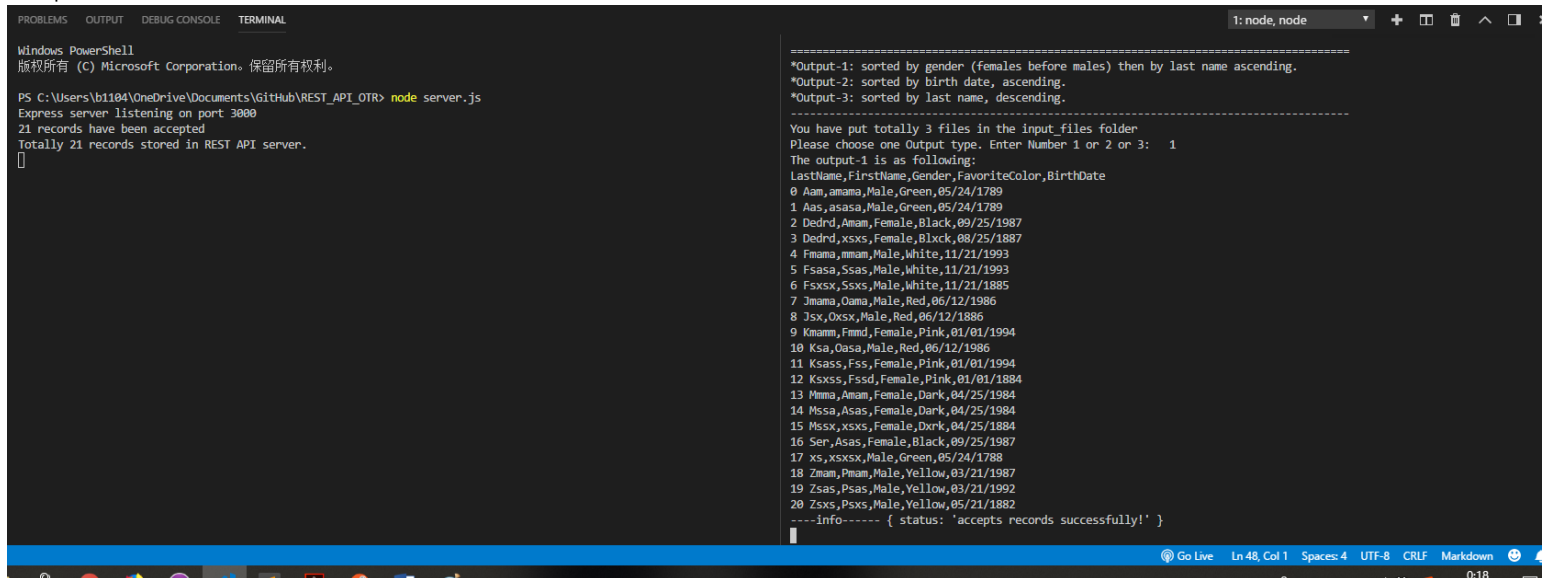


Screenshot use VS code and postman

Start server and command line app.



Output1:



Output2:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: node, node

Windows PowerShell
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PS C:\Users\b1184\OneDrive\Documents\Github\REST_API_OTR> node server.js
Express server listening on port 3000
21 records have been accepted
Totally 21 records stored in REST API server.
21 records have been accepted
Totally 42 records stored in REST API server.
[]

*Output-1: sorted by gender (females before males) then by last name ascending.
*Output-2: sorted by birth date, ascending.
*Output-3: sorted by last name, descending.
-----
You have put totally 3 files in the input_files folder
Please choose one Output type. Enter Number 1 or 2 or 3: 2
The output-2 is as following:
LastName,FirstName,Gender,FavoriteColor,BirthDate
0 xs,xsxsx,Male,Green,05/24/1788
1 Aas,asasa,Male,Green,05/24/1789
2 Aam,amama,Male,Green,05/24/1789
3 Zsxs,Psxs,Male,Yellow,05/21/1882
4 Kxsxs,Fssd,Female,Pink,01/01/1884
5 Mssx,xsxs,Female,Dxrk,04/25/1884
6 Fsxsx,Sxsx,Male,White,11/21/1885
7 Jsx,Oxsx,Male,Red,06/12/1886
8 Dedrd,xsxs,Female,Blxck,08/25/1887
9 Mssa,Asas,Female,Dark,04/25/1984
10 Mmma,Amam,Female,Dark,04/25/1984
11 Ksa,Oasa,Male,Red,06/12/1986
12 Jmama,Oama,Male,Red,06/12/1986
13 Zmam,Pmam,Male,Yellow,03/21/1987
14 Dedrd,Amam,Female,Black,09/25/1987
15 Ser,Asas,Female,Black,09/25/1987
16 Zsas,Psas,Male,Yellow,03/21/1992
17 Fsasa,Ssas,Male,White,11/21/1993
18 Fmama,mmam,Male,White,11/21/1993
19 Knamm,Fmd,Female,Pink,01/01/1994
20 Ksass,Fss,Female,Pink,01/01/1994
----info----- { status: 'accepts records successfully!' }
```

Output3:

```
Windows PowerShell
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PS C:\Users\b1184\OneDrive\Documents\Github\REST_API_OTR> node server.js
Express server listening on port 3000
21 records have been accepted
Totally 21 records stored in REST API server.
21 records have been accepted
Totally 42 records stored in REST API server.
21 records have been accepted
Totally 63 records stored in REST API server.
[]

*Output-1: sorted by gender (females before males) then by last name ascending.
*Output-2: sorted by birth date, ascending.
*Output-3: sorted by last name, descending.
-----
You have put totally 3 files in the input_files folder
Please choose one Output type. Enter Number 1 or 2 or 3: 3
The output-3 is as following:
LastName,FirstName,Gender,FavoriteColor,BirthDate
0 Zsxs,Psxs,Male,Yellow,05/21/1882
1 Zsas,Psas,Male,Yellow,03/21/1992
2 Zmam,Pmam,Male,Yellow,03/21/1987
3 xs,xsxsx,Male,Green,05/24/1788
4 Ser,Asas,Female,Black,09/25/1987
5 Mssx,xsxs,Female,Dxrk,04/25/1884
6 Mssa,Asas,Female,Dark,04/25/1984
7 Mmma,Amam,Female,Dark,04/25/1984
8 Kxsxs,Fssd,Female,Pink,01/01/1884
9 Ksass,Fss,Female,Pink,01/01/1994
10 Ksa,Oasa,Male,Red,06/12/1986
11 Knamm,Fmd,Female,Pink,01/01/1994
12 Jsx,Oxsx,Male,Red,06/12/1886
13 Jmama,Oama,Male,Red,06/12/1986
14 Fsxsx,Sxsx,Male,White,11/21/1885
15 Fsasa,Ssas,Male,White,11/21/1993
16 Fmama,mmam,Male,White,11/21/1993
17 Dedrd,xsxs,Female,Blxck,08/25/1887
18 Dedrd,Amam,Female,Black,09/25/1987
19 Aas,asasa,Male,Green,05/24/1789
20 Aam,amama,Male,Green,05/24/1789
----info----- { status: 'accepts records successfully!' }
```

Get /records/gender

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Filter

HistoryCollections

Clear all

Today

GET http://localhost:3000/records/gender

http://localhost:3000/ + ...

No Environment

GET http://localhost:3000/records/gender

ParamsSendSave

AuthorizationHeaders (1)BodyPre-request ScriptTests

Key	Value	Description
Content-Type	text/plain	
New key	Value	Description

BodyCookiesHeaders (6)Test Results

Status: 200 OKTime: 40 ms

PrettyRawPreviewJSON

```
1 {
2   "0": {
3     "LastName": "Ser",
4     "FirstName": "Asas",
5     "Gender": "Female",
6     "FavoriteColor": "Black",
7     "BirthDate": "09/25/1987"
8   },
9   "1": {
10    "LastName": "Mssx",
11    "FirstName": "xsxs",
12    "Gender": "Female",
13    "FavoriteColor": "Dark",
14    "BirthDate": "04/25/1884"
15  },
16  "2": {
17    "LastName": "Mssa",
18    "FirstName": "Asas",
19    "Gender": "Female",
20    "FavoriteColor": "Dark",
21    "BirthDate": "04/25/1984"
22  },
23  "3": {
24    "LastName": "Mmma",
25    "FirstName": "Amam",
26    "Gender": "Female",
27    "FavoriteColor": "Dark",
28    "BirthDate": "04/25/1984"
29  },
30  "4": {
31    "LastName": "Kxsxs",
32    "FirstName": "Fssd",
33    "Gender": "Female",
34    "FavoriteColor": "Pink",
35    "BirthDate": "01/01/1884"
36  },
37  "5": {
38    "LastName": "Ksass",
39    "FirstName": "Fss",
40    "Gender": "Female",
41    "FavoriteColor": "Pink",
42    "BirthDate": "01/01/1994"
43  },
44 }
```

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Filter No Environment

History Collections Clear all

Today GET http://localhost:3000/records/gender

GET http://localhost:3000/records/gender

Params Send Save

Pretty Raw Preview JSON

```
398   "gender": "Male",
399   "FavoriteColor": "White",
399   "BirthDate": "11/21/1885"
399   },
399   "56": {
399     "LastName": "Jmama",
399     "FirstName": "Omama",
399     "Gender": "Male",
399     "FavoriteColor": "Red",
399     "BirthDate": "06/12/1886"
399   },
399   "57": {
399     "LastName": "Jsvk",
399     "FirstName": "Oxsk",
399     "Gender": "Male",
399     "FavoriteColor": "Red",
399     "BirthDate": "06/12/1886"
399   },
399   "58": {
399     "LastName": "Ksa",
399     "FirstName": "Oasa",
399     "Gender": "Male",
399     "FavoriteColor": "Red",
399     "BirthDate": "06/12/1886"
399   },
399   "59": {
399     "LastName": "xs",
399     "FirstName": "xssx",
399     "Gender": "Male",
399     "FavoriteColor": "Green",
399     "BirthDate": "05/24/1789"
399   },
399   "60": {
399     "LastName": "Zmaa",
399     "FirstName": "Pmaa",
399     "Gender": "Male",
399     "FavoriteColor": "Yellow",
399     "BirthDate": "03/21/1987"
399   },
399   "61": {
399     "LastName": "Zsas",
399     "FirstName": "Pas",
399     "Gender": "Male",
399     "FavoriteColor": "Yellow",
399     "BirthDate": "03/21/1992"
399   },
399   "62": {
399     "LastName": "Zsxs",
399     "FirstName": "Pss",
399     "Gender": "Male",
399     "FavoriteColor": "Yellow",
399     "BirthDate": "05/21/1882"
399   }
399 }
```

Get /records/name

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Filter No Environment

History Collections Clear all

Today GET http://localhost:3000/records/name

GET http://localhost:3000/records/gender

Params Send Save

Pretty Raw Preview JSON

```
1 {
2   "0": {
3     "LastName": "Aam",
4     "FirstName": "amama",
5     "Gender": "Male",
6     "FavoriteColor": "Green",
7     "BirthDate": "05/24/1789"
8   },
9   "1": {
10    "LastName": "Aam",
11    "FirstName": "amama",
12    "Gender": "Male",
13    "FavoriteColor": "Green",
14    "BirthDate": "05/24/1789"
15  },
16  "2": {
17    "LastName": "Aam",
18    "FirstName": "amama",
19    "Gender": "Male",
20    "FavoriteColor": "Green",
21    "BirthDate": "05/24/1789"
22  },
23  "3": {
24    "LastName": "Aas",
25    "FirstName": "asssa",
26    "Gender": "Male",
27    "FavoriteColor": "Green",
28    "BirthDate": "05/24/1789"
29  },
30  "4": {
31    "LastName": "Aas",
32    "FirstName": "asssa",
33    "Gender": "Male",
34    "FavoriteColor": "Green",
35    "BirthDate": "05/24/1789"
36  },
37  "5": {
38    "LastName": "Aas",
39    "FirstName": "asssa",
40    "Gender": "Male",
41    "FavoriteColor": "Green",
42    "BirthDate": "05/24/1789"
43  },
44  "6": {
45    "LastName": "Dedrd",
46    "FirstName": "amam",
47    "Gender": "Female",
48    "FavoriteColor": "Black",
49    "BirthDate": "09/25/1967"
50  },
51  "7": {
52    "LastName": "Dedrd",
53    "FirstName": "xssa",
54    "Gender": "Female",
55  }
```

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Filter

HistoryCollections

Clear all

Today

GET http://localhost:3000/records/name

GET http://localhost:3000/records/gender

http://localhost:3000/

+

...

No Environment

GET

http://localhost:3000/records/name

Params

Send

Save

PrettyRawPreviewJSON

398"gender": "Male",

399"favoriteColor": "Yellow",

392"birthdate": "03/21/1987"

393},

394"56": {

395"lastName": "Zeem",

396"firstName": "Pneem",

397"gender": "Male",

398"favoriteColor": "Yellow",

399"birthdate": "03/21/1987"

400},

401"57": {

402"lastName": "Zeas",

403"firstName": "Pseas",

404"gender": "Male",

405"favoriteColor": "Yellow",

406"birthdate": "03/21/1992"

407},

408"58": {

409"lastName": "Zeas",

410"firstName": "Pseas",

411"gender": "Male",

412"favoriteColor": "Yellow",

413"birthdate": "03/21/1992"

414},

415"59": {

416"lastName": "Zeas",

417"firstName": "Pseas",

418"gender": "Male",

419"favoriteColor": "Yellow",

420"birthdate": "03/21/1992"

421},

422"60": {

423"lastName": "Zexs",

424"firstName": "Psexs",

425"gender": "Male",

426"favoriteColor": "Yellow",

427"birthdate": "05/21/1882"

428},

429"61": {

430"lastName": "Zexs",

431"firstName": "Psexs",

432"gender": "Male",

433"favoriteColor": "Yellow",

434"birthdate": "05/21/1882"

435},

436"62": {

437"lastName": "Zexs",

438"firstName": "Psexs",

439"gender": "Male",

440"favoriteColor": "Yellow",

441"birthdate": "05/21/1882"

442}

443}

Get /records/birthdate

NEWRunnerImport

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Filter

HistoryCollections

Clear all

Today

GET http://localhost:3000/records/birthdate

GET http://localhost:3000/records/name

GET http://localhost:3000/records/gender

http://localhost:3000/

+

...

No Environment

GET

http://localhost:3000/records/birthdate

Params

Send

Save

AuthorizationHeaders (1)BodyPre-request ScriptTests

Code

Key	Value	Description
<input checked="" type="checkbox"/> Content-Type	text/plain	
New key	Value	Description

BodyCookiesHeaders (6)Test Results

Status: 200 OKTime: 42 ms

PrettyRawPreviewJSON

1 {

2 "0": {

3 "lastName": "xs",

4 "firstName": "xpxsx",

5 "gender": "Male",

6 "favoriteColor": "Green",

7 "birthdate": "05/24/1788"

8 },

9 "1": {

10 "lastName": "xs",

11 "firstName": "xpxsx",

12 "gender": "Male",

13 "favoriteColor": "Green",

14 "birthdate": "05/24/1788"

15 },

16 "2": {

17 "lastName": "xs",

18 "firstName": "xpxsx",

19 "gender": "Male",

20 "favoriteColor": "Green",

21 "birthdate": "05/24/1788"

22 },

23 "3": {

24 "lastName": "Aam",

25 "firstName": "amama",

26 "gender": "Male",

27 "favoriteColor": "Green",

28 "birthdate": "05/24/1789"

29 },

30 "4": {

31 "lastName": "Aam",

32 "firstName": "amama",

33 "gender": "Male",

34 "favoriteColor": "Green",

35 "birthdate": "05/24/1789"

36 },

37 "5": {

38 "lastName": "Aas",

39 "firstName": "asasa",

40 "gender": "Male",

41 "favoriteColor": "Green",

42 "birthdate": "05/24/1789"

43 },

NEW

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Import

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Filter

HistoryCollections

Clear all

http://localhost:3000/

No Environment

GEThttp://localhost:3000/records/birthdateParamsSendSave

▼ Today

GEThttp://localhost:3000/records/birthdate

GEThttp://localhost:3000/records/name

GEThttp://localhost:3000/records/gender

PrettyRawPreviewJSON

```
398  "gender": "Male",
399  "FavoriteColor": "White",
400  "BirthDate": "11/21/1993"
401 },
402 "56": {
403   "LastName": "Fname",
404   "FirstName": "mnam",
405   "Gender": "Male",
406   "FavoriteColor": "White",
407   "BirthDate": "11/21/1993"
408 },
409 "57": {
410   "LastName": "Ksass",
411   "FirstName": "Fss",
412   "Gender": "Female",
413   "FavoriteColor": "Pink",
414   "BirthDate": "01/01/1994"
415 },
416 "58": {
417   "LastName": "Knam",
418   "FirstName": "Fmnd",
419   "Gender": "Female",
420   "FavoriteColor": "Pink",
421   "BirthDate": "01/01/1994"
422 },
423 "59": {
424   "LastName": "Knam",
425   "FirstName": "Fmnd",
426   "Gender": "Female",
427   "FavoriteColor": "Pink",
428   "BirthDate": "01/01/1994"
429 },
430 "60": {
431   "LastName": "Knam",
432   "FirstName": "Fmnd",
433   "Gender": "Female",
434   "FavoriteColor": "Pink",
435   "BirthDate": "01/01/1994"
436 },
437 "61": {
438   "LastName": "Ksass",
439   "FirstName": "Fss",
440   "Gender": "Female",
441   "FavoriteColor": "Pink",
442   "BirthDate": "01/01/1994"
443 }
```

Unit test:

```
PS C:\Users\b1104\OneDrive\Documents\GitHub\REST_API_OTR> mocha test
```

Express server listening on port 3000

test sort by last name ascending functions in methods.js

#lastNameAscending()

- ✓ should return a two-dimensional array with lastname in [i][0]
- ✓ should sort array no matter upper/lowercase LastName
- ✓ should return array by last Name Ascending

#lastNameDescending()

- ✓ should return a two-dimensional array with lastname in [i][0]
- ✓ should sort array no matter upper/lowercase LastName
- ✓ should return array by last Name Descending

#birtDateAscending()

- ✓ should return a two-dimensional array with birthdate in [i][4]
- ✓ should sort two-dimensional array by birtDateAscending

#ladyFirst()

- ✓ should return a two-dimensional array with gender in [i][2]
- ✓ should sort two-dimensional array by lady first

test Post records and Get records from server in server.js

/records Post()

- ✓ should accept json array return 200 and without error or exceptions

4 records have been accepted

Totally 4 records stored in REST API server.

/records/gender Get()

- ✓ should return 200 and json data without error or exceptions

return totally 4 records sorted by gender and in JSON

/records/birthdate Get()

- ✓ should return 200 and json data without error or exceptions

return totally 4 records sorted by birthDate and in JSON

/records/name Get()

- ✓ should return 200 and json data without error or exceptions

return totally 4 records sorted by lastName and in JSON

/records/gender Get()

- ✓ should return records sorted by gender

return totally 4 records sorted by gender and in JSON

/records/name Get()

- ✓ should return records sorted by last name ascending

return totally 4 records sorted by lastName and in JSON

/records/birthdate Get()

- ✓ should return records sorted by birthdate ascending

return totally 4 records sorted by birthDate and in JSON

17 passing (116ms)