keyvalue-db library

This library contains functions as below. We can use both synchronous and asynchronous way

```
    setpath() - (optional) to set the path of the db file, default is ./db.json
    readkey() - to read the key-value pair from the db file. Argument: key
    createkey() - to create new key-value pair and adds to the db file. Argument: key, value, timeout(default: 0)
```

deletekey() - to delete the existing key-value pair from the db file. Argument: key

Created a CLI app for synchronous way and Web app for asynchronous way. Attached the screenshot below.

- git clone https://github.com/thephenomenal10/key-value_dataStore
- npm install
- npm run start-web to start the web app
- npm run start-cli to start the cli

```
Press ^C to abort current expression, ^D to exit the repl
> .editor
// Entering editor mode (^D to finish, ^C to cancel)
db

{
   async: {
     setpath: [Function: setpath],
     readkey: [Function: readkey],
     createkey: [Function: deletekey],
     deletekey: [Function: deletekey]
},
   setpath: [Function: setpath],
   readkey: [Function: readkey],
   createkey: [Function: createkey],
   deletekey: [Function: deletekey]
}
```

Using keyvalue-db library in node shell

Here we are adding apple with default timeout value (0). This value we can read at any time.

Next we are including number in the key which gives us the error.

Then we are a key: grape with 15 sec as timeout value. Reading grape within 15 secs.

Reading the key: grape after 15 secs gives us the error as below.

```
% node
Welcome to Node.js v12.13.0.
Type ".help" for more information.
> let db = require("./keyvalue-db")
undefined
> db.createkey("apple",30)
'key-value pair created'
> db.readkey("apple")
'{"apple":30}'
> db.readkey("grape")
{ error: 'key does not exists' }
> db.createkey("grape12",30)
{ error: 'key must contain only alphabets and must not exceed 32 characters'
}
> db.createkey("grape",30,15)
'key-value pair created'
> db.readkey("grape")
'{"grape":30}'
> db.readkey("grape")
'{"grape":30}'
> db.readkey("grape")
'{"grape":50}'
} error: 'time-to-live of key: grape has expired' }
> |
```

Here we creating new key-value pair with key lemon having timeout as 40 sec.

Again creating key: banana with timeout 0.

Next deleting banana is successful since timeout is 0.

While deleting lemon after 40 sec gives us the time-to-live expired error

Creating key which exceeds 32 characters gives us error.

Here we can use setpath() to set a new path for the json file. Default path ./db.json

If we need to set a different path we can do that using setpath() like below.

If we give filename other than json file it gives us error. Also if the file name contains invalid characters it gives us error.

```
$ node
Welcome to Node.js v12.13.0.
Type ".help" for more information.
> let db = require("./keyvalue-db")
undefined
> db.setpath("./diff-db.json")
'diff-db.json path set'
>
> db.setpath("./diff-db")
{ error: 'invalid file name: should be a json file' }
> db.setpath("./diff-db?>,[.json")
{ error: 'given path is invalid' }
> 
> db.setpath("./diff.json")
'diff.json path set'
> |
```

```
? Please enter the file path ./db.json
success: ./db.json path set
? Please choose the option create
? Please enter the "key" apple
? Please enter the "value" 30
? Please enter the "timeout" in sec.
If not input given default value 0 is assigned 0
key-value pair created
? Please choose the option read
? Please enter the "key" apple
{"apple":30}
? Please choose the option (Use arrow keys)
> read
create
delete
exit
```

Errors:

```
? Please enter the file path ./db.json
success: ./db.json path set
? Please choose the option read
? Please enter the "key" banana
error: key does not exists
? Please enter the "key" orange34
? Please enter the "value" 12
? Please enter the "value" 12
? Please enter the "timeout" in sec.
If not input given default value 0 is assigned 0
error: key must contain only alphabets and must not exceed 32 characters
? Please choose the option delete
? Please enter the "key" banana
{"error": "key does not exists"}
? Please choose the option (Use arrow keys)
> read
create
delete
exit
```

Error: time to live expired

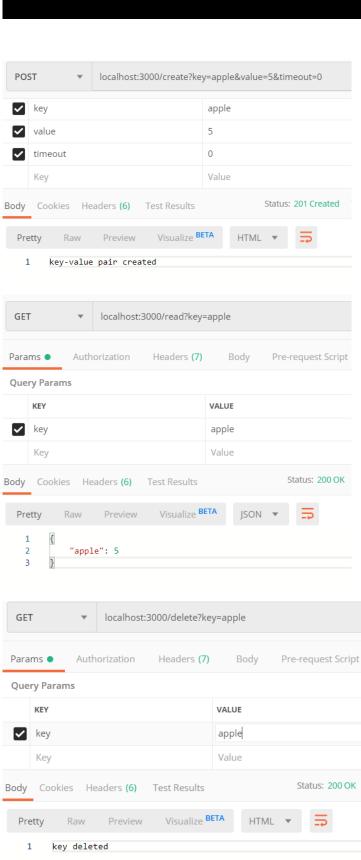
```
? Please enter the file path ./db.json
success: ./db.json path set
? Please choose the option create
? Please enter the "key" orange
? Please enter the "value" 35
? Please enter the "timeout" in sec.
If not input given default value 0 is assigned 25
key-value pair created
? Please choose the option read
? Please enter the "key" orange
{"orange":35}
? Please choose the option read
? Please choose the option read
? Please choose the option read
? Please choose the option (Use arrow keys)
> read
create
delete
exit
```

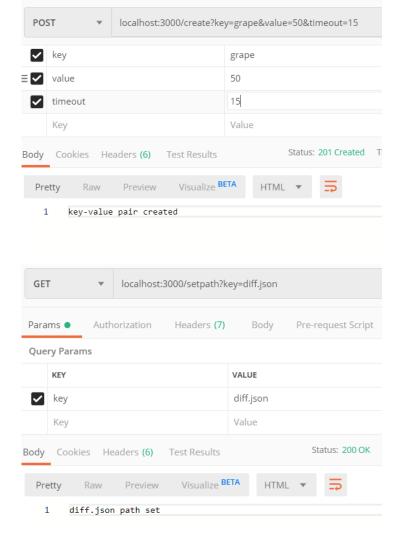
Web app using keyvalue-db library (asynchronous way)

```
MINGW64/f/keyvalue-db

sahyog@DESKTOP-IA5VVES MINGW64 /f/keyvalue-db (main)
$ npm run start-web
> keyvalue-db-app@1.0.0 start-web F:\keyvalue-db
> node ./app-web.js

Server is running!!: 3000
```





Errors:

