

### Steps to Run.

1. Download from the github repository
2. Use the command npm install in the terminal to install required dependencies.  
(node\_modules)
3. npm run test would start the testing using Mocha
4. Npm run dev would run the server in a development environment.

### Testing Criterias that are conducted :-

- Adding ledger for paying monthly.
- Adding ledger for paying weekly.
- Adding ledger for paying fortnightly.
- Adding a very long ledger for weekly paying.
- Testing what happens if an incorrect date is entered.
- Testing what happens if the start date is greater than the end date.
- Testing if weekly\_rent is a number.

### Extra Features Added:-

- Calculating the entire total the tenet has spent during his time period.

### Important Dependencies used :-

- Express.
- Moment - For displaying and updating the date.
- Mocha/Chai/Supertest - For unit testing purposes.

### Validations Done :-

- Checking if start\_date and end\_date is valid.
- Checking if start\_date is less than end\_date.
- Checking if frequency is larger than the staying period.
- Checking if entered frequency is valid.
- Checking if weekly\_rent is valid.

## Screenshot of the test results :-

The screenshot shows a Visual Studio Code terminal window with the title 'postjs - Different - Visual Studio Code'. The terminal output displays the results of a test suite for 'postjs'. It starts with 'Server Started' and 'POST /ledger'. The first test, 'Adding ledger monthly works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Jun 10th 2011 and ends on Oct 10th 2011. He pays \$30 a week, on a monthly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Jun 10th 2011'	'Jul 10th 2011'	'128.57'
1	'Jul 10th 2011'	'Aug 10th 2011'	'132.86'
2	'Aug 10th 2011'	'Sep 10th 2011'	'132.86'
3	'Sep 10th 2011'	'Oct 10th 2011'	'128.57'

The first payment is on Jun 10th 2011 which is the first day of the lease. Going forward, every 31 days (Number of days will vary for months), Alex will be charged for every monthly until the lease ends on Oct 10th 2011. Total is 522.86.

The second test, 'Adding ledger weekly works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Jun 10th 2011 and ends on Jun 24th 2011. He pays \$10 a week, on a weekly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Jun 10th 2011'	'Jun 17th 2011'	'10.00'
1	'Jun 17th 2011'	'Jun 24th 2011'	'10.00'

The first payment is on Jun 10th 2011 which is the first day of the lease. Going forward, every 7 days (Number of days will vary for months), Alex will be charged for every weekly until the lease ends on Jun 24th 2011. Total is 20.00.

The third test, 'Adding ledger fortnightly works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Jun 10th 2011 and ends on Jul 24th 2011. He pays \$10 a week, on a fortnightly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Jun 10th 2011'	'Jun 24th 2011'	'20.00'
1	'Jun 24th 2011'	'Jul 8th 2011'	'20.00'
2	'Jul 8th 2011'	'Jul 22nd 2011'	'20.00'
3	'Jul 22nd 2011'	'Jul 24th 2011'	'2.86'

The first payment is on Jun 10th 2011 which is the first day of the lease. Going forward, every 14 days (Number of days will vary for months), Alex will be charged for every two weeks until the lease ends on Jul 24th 2011. Total is 62.86.

The fourth test, 'February month works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Feb 1st 2011 and ends on Apr 1st 2011. He pays \$10 a week, on a monthly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Feb 1st 2011'	'Mar 1st 2011'	'40.00'
1	'Mar 1st 2011'	'Apr 1st 2011'	'44.29'

The first payment is on Feb 1st 2011 which is the first day of the lease. Going forward, every 31 days (Number of days will vary for months), Alex will be charged for every monthly until the lease ends on Apr 1st 2011. Total is 84.29.

The fifth test, 'Long Ledger works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Jan 1st 2011 and ends on Jun 1st 2011. He pays \$5 a week, on a weekly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Jan 1st 2011'	'Jan 8th 2011'	'5.00'
1	'Jan 8th 2011'	'Jan 15th 2011'	'5.00'
2	'Jan 15th 2011'	'Jan 22nd 2011'	'5.00'
3	'Jan 22nd 2011'	'Jan 29th 2011'	'5.00'
4	'Jan 29th 2011'	'Feb 5th 2011'	'5.00'
5	'Feb 5th 2011'	'Feb 12th 2011'	'5.00'
6	'Feb 12th 2011'	'Feb 19th 2011'	'5.00'
7	'Feb 19th 2011'	'Feb 26th 2011'	'5.00'
8	'Feb 26th 2011'	'Mar 5th 2011'	'5.00'
9	'Mar 5th 2011'	'Mar 12th 2011'	'5.00'
10	'Mar 12th 2011'	'Mar 19th 2011'	'5.00'
11	'Mar 19th 2011'	'Mar 26th 2011'	'5.00'
12	'Mar 26th 2011'	'Apr 2nd 2011'	'5.00'
13	'Apr 2nd 2011'	'Apr 9th 2011'	'5.00'
14	'Apr 9th 2011'	'Apr 16th 2011'	'5.00'
15	'Apr 16th 2011'	'Apr 23rd 2011'	'5.00'
16	'Apr 23rd 2011'	'Apr 30th 2011'	'5.00'
17	'Apr 30th 2011'	'May 7th 2011'	'5.00'
18	'May 7th 2011'	'May 14th 2011'	'5.00'
19	'May 14th 2011'	'May 21st 2011'	'5.00'
20	'May 21st 2011'	'May 28th 2011'	'5.00'
21	'May 28th 2011'	'Jun 1st 2011'	'2.86'

The first payment is on Jan 1st 2011 which is the first day of the lease. Going forward, every 7 days (Number of days will vary for months), Alex will be charged for every weekly until the lease ends on Jun 1st 2011. Total is 187.86.

Figure 1.1- Valid test

The screenshot shows a Visual Studio Code terminal window with the title 'postjs - Different - Visual Studio Code'. The terminal output displays the results of a test suite for 'postjs'. It starts with 'lease ends on Jul 24th 2011. Total is 62.86'. The first test, 'February month works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Feb 1st 2011 and ends on Apr 1st 2011. He pays \$10 a week, on a monthly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Feb 1st 2011'	'Mar 1st 2011'	'40.00'
1	'Mar 1st 2011'	'Apr 1st 2011'	'44.29'

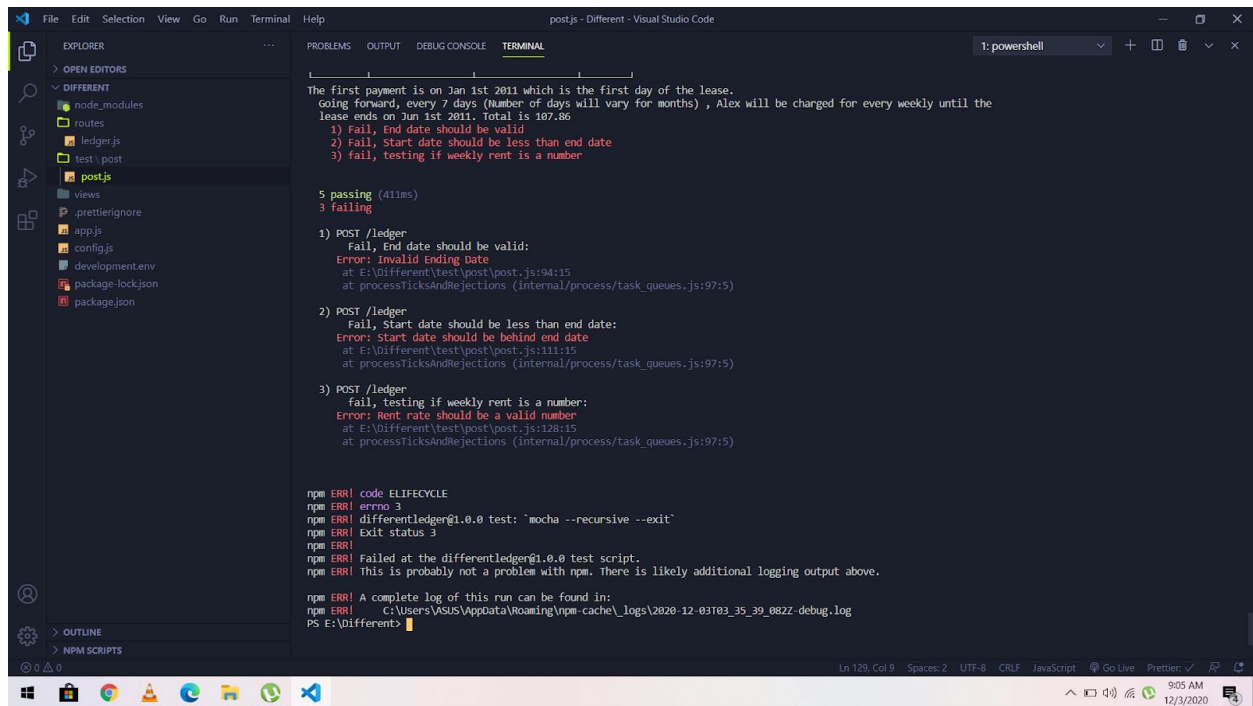
The first payment is on Feb 1st 2011 which is the first day of the lease. Going forward, every 31 days (Number of days will vary for months), Alex will be charged for every monthly until the lease ends on Apr 1st 2011. Total is 84.29.

The second test, 'Long Ledger works', passes. The test description states: 'Alex, one of our tenants, signed a lease with Different. His lease starts on Jan 1st 2011 and ends on Jun 1st 2011. He pays \$5 a week, on a weekly basis.' A table shows the payment schedule for this lease:

(index)	StartDate	EndDate	Amount
0	'Jan 1st 2011'	'Jan 8th 2011'	'5.00'
1	'Jan 8th 2011'	'Jan 15th 2011'	'5.00'
2	'Jan 15th 2011'	'Jan 22nd 2011'	'5.00'
3	'Jan 22nd 2011'	'Jan 29th 2011'	'5.00'
4	'Jan 29th 2011'	'Feb 5th 2011'	'5.00'
5	'Feb 5th 2011'	'Feb 12th 2011'	'5.00'
6	'Feb 12th 2011'	'Feb 19th 2011'	'5.00'
7	'Feb 19th 2011'	'Feb 26th 2011'	'5.00'
8	'Feb 26th 2011'	'Mar 5th 2011'	'5.00'
9	'Mar 5th 2011'	'Mar 12th 2011'	'5.00'
10	'Mar 12th 2011'	'Mar 19th 2011'	'5.00'
11	'Mar 19th 2011'	'Mar 26th 2011'	'5.00'
12	'Mar 26th 2011'	'Apr 2nd 2011'	'5.00'
13	'Apr 2nd 2011'	'Apr 9th 2011'	'5.00'
14	'Apr 9th 2011'	'Apr 16th 2011'	'5.00'
15	'Apr 16th 2011'	'Apr 23rd 2011'	'5.00'
16	'Apr 23rd 2011'	'Apr 30th 2011'	'5.00'
17	'Apr 30th 2011'	'May 7th 2011'	'5.00'
18	'May 7th 2011'	'May 14th 2011'	'5.00'
19	'May 14th 2011'	'May 21st 2011'	'5.00'
20	'May 21st 2011'	'May 28th 2011'	'5.00'
21	'May 28th 2011'	'Jun 1st 2011'	'2.86'

The first payment is on Jan 1st 2011 which is the first day of the lease. Going forward, every 7 days (Number of days will vary for months), Alex will be charged for every weekly until the lease ends on Jun 1st 2011. Total is 187.86.

Figure 2.1 - Valid test (2)



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File Edit Selection View Go Run Terminal Help
post.js - Different - Visual Studio Code

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
1: powershell

The first payment is on Jan 1st 2011 which is the first day of the lease.
going forward, every 7 days (Number of days will vary for months) , Alex will be charged for every weekly until the
lease ends on Jun 1st 2011. Total is 107.86
1) fail, End date should be valid
2) fail, Start date should be less than end date
3) fail, testing if weekly rent is a number

5 passing (411ms)
3 failing

1) POST /ledger
  Fail, End date should be valid:
  Error: Invalid Ending Date
    at E:\Different\test\post\post.js:94:15
    at processTicksAndRejections (internal/process/task_queues.js:97:5)

2) POST /ledger
  Fail, Start date should be less than end date:
  Error: Start date should be behind end date
    at E:\Different\test\post\post.js:111:15
    at processTicksAndRejections (internal/process/task_queues.js:97:5)

3) POST /ledger
  fail, testing if weekly rent is a number:
  Error: Rent rate should be a valid number
    at E:\Different\test\post\post.js:128:15
    at processTicksAndRejections (internal/process/task_queues.js:97:5)

npm ERR! code ELIFECYCLE
npm ERR! errno 3
npm ERR! differentledger@1.0.0 test: "mocha --recursive --exit"
npm ERR! Exit status 3
npm ERR!
npm ERR! Failed at the differentledger@1.0.0 test script.
npm ERR! This is probably not a problem with npm. There is likely additional logging output above.

npm ERR! A complete log of this run can be found in:
npm ERR!   C:\Users\ASUS\AppData\Roaming\npm-cache\_logs\2020-12-03T03_35_39_082Z-debug.log
PS E:\Different>
```

Figure 1.3 - Failed Tests and Summary