Project - URL SHORTER (SHTR) V2

In this version, we will add on top of our existing URL Shorter Application.

New Features

Add clicks as a field to the existing URL Schema. This field is used to store the collection of click information that we require for future statistics and data mining.

Each click object will store the following information

- Clicked date and time - should be set to default datetime
- Ip address of the user - must be stored as a string
- Browser Name - must be stored as a string
- Os type - Machintosh / Windows / Linux - must be stored as a string
- Devise Type - mobile / desktop - must be stored as a string

Tip - Each request object will have the above mentioned details, read more here.

In this project implement the express-useragent npm package for the getting the details of the request.

API endpoint for SHORT URL

HTTP Method	URI	Actions
GET	/:hash	Finds the url with the hash value and redirects the user to the respective page

When a specific url is accessed, push the object into the clicks array by using the $push method, rather than finding the document, modifying it in memory and saving it back.

Setup an Error Handling Middleware

What if the user tries to access a route that doesn't exist within your application.
Express defaults to an error which says "Error - route not found".

Eg - http://localhost:3000/add/url

Instead you are expected to create middleware function which will respond with a status code of 404 and send back json with notice "The resource you are looking for doesn't exist."

Know more about the error handling middleware here. More detailed information on the implementation can be found here.

Logging the requests

Implement logging within the application, such that whenever the request is made to your node application, it console logs the message. Implement morgan package within your application and set it up as a custom middleware.

Extra -

1. Morgan has predefined options that will output the message on the terminal. But you are required to setup the logs in below given format.

   Started :method :url for :ip_address at :datetime
   Completed :status in :response-time

   Sample Log -

   ```
   Started GET "/urls" for 127.0.0.1 at 2018-08-30 08:00:40 +0530
   Completed 200 OK in 192ms
   ```

   Note - Use the default tokens provided by morgan for method, url, ip, status & response-time, Create a new token called as datetime that can be used in your log middleware function.
   How to create a custom token, read here.

2. The logs should not only printed on the console, but it should also be written to a file, that will be under project_root/logs/access.log. Did you know that node provides modules for accessing the file system on you computer. Read about node fs module before proceeding.