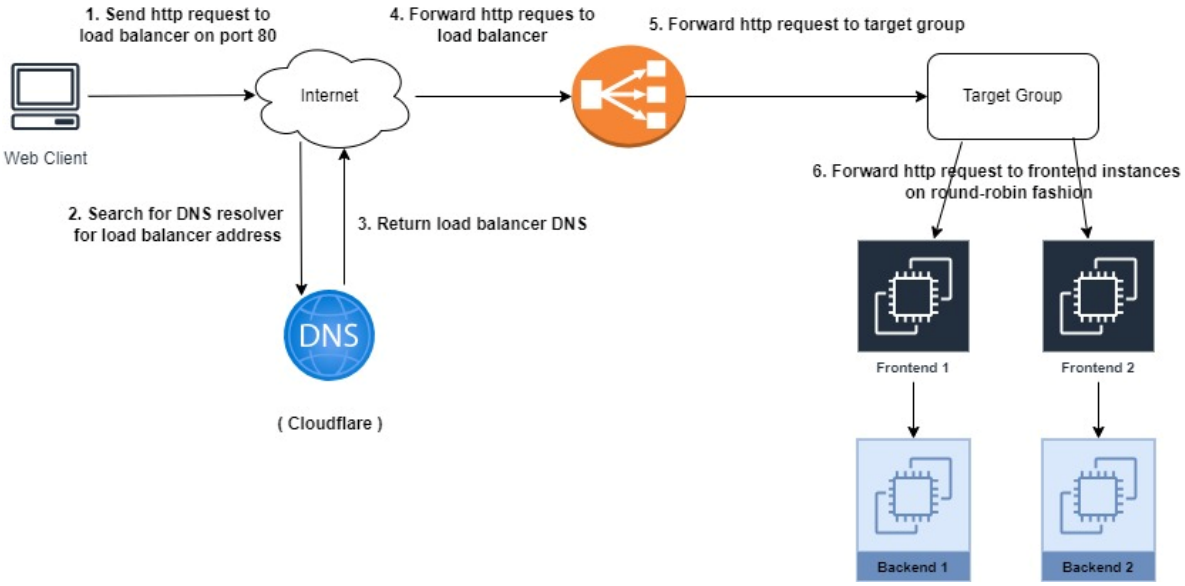
Travel memory application

Architecture Diagram:



Steps for deployment process:

Step 1.a:
Launch the instance (sonal_backend1) and clone the repository using below command:

git clone https://github.com/UnpredictablePrashant/TravelMemory.git

Step 1.b:
Create the .env file in the TravelMemory/backend folder and add below details

MONGO_URI='mongodb+srv://sonal:sonal1189@cluster-sonal.0ktone2.mongodb.net/MERN'
PORT=3001

Step 1.c
Start the backend server with command “npm install” and “node index.js”
This will start the backend server at port no 3001

```
ubuntu@ip-172-31-4-177:~$ cd TravelMemory/
ubuntu@ip-172-31-4-177:~/TravelMemory$ cd backend/
ubuntu@ip-172-31-4-177:~/TravelMemory/backend$ npm install

up to date, audited 118 packages in 3s

13 packages are looking for funding
  run `npm fund` for details

9 vulnerabilities (5 moderate, 3 high, 1 critical)

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
ubuntu@ip-172-31-4-177:~/TravelMemory/backend$ node index.js
Server started at http://localhost:3001
```

Step 1.d

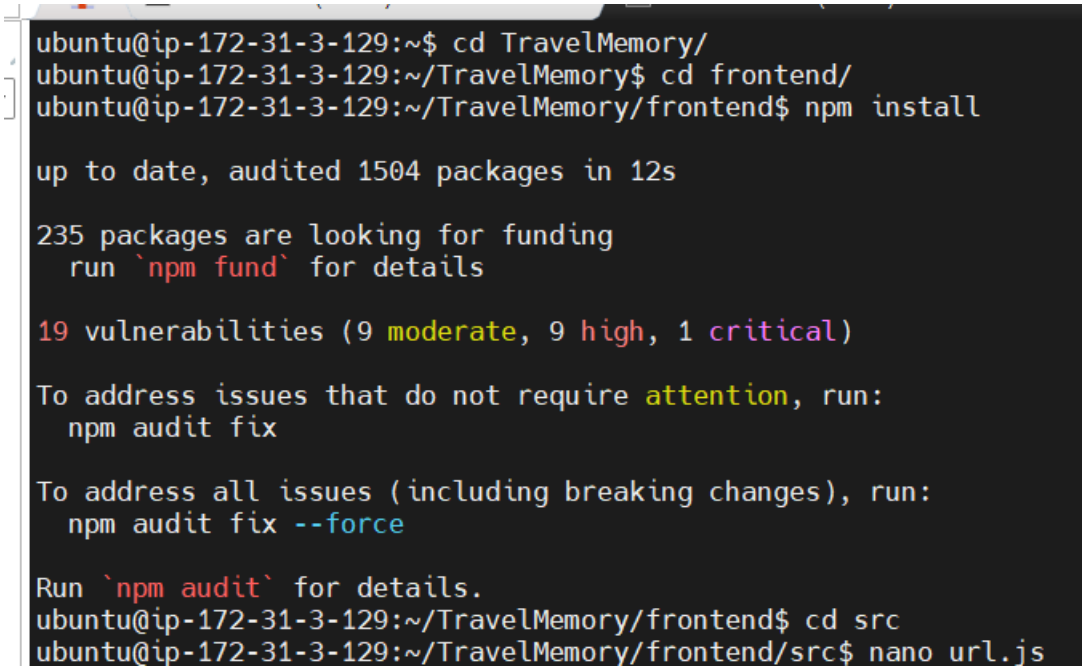
Set up a reverse proxy using nginx with below configuration:

```
ubuntu@ip-172-31-3-129:~$ cd TravelMemory/
ubuntu@ip-172-31-3-129:~/TravelMemory$ sudo apt-get install nginx
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nginx is already the newest version (1.24.0-2ubuntu7).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
ubuntu@ip-172-31-3-129:~/TravelMemory$ cd /etc/nginx/sites-available/
ubuntu@ip-172-31-3-129:/etc/nginx/sites-available$ ls
default
ubuntu@ip-172-31-3-129:/etc/nginx/sites-available$ nano default
```

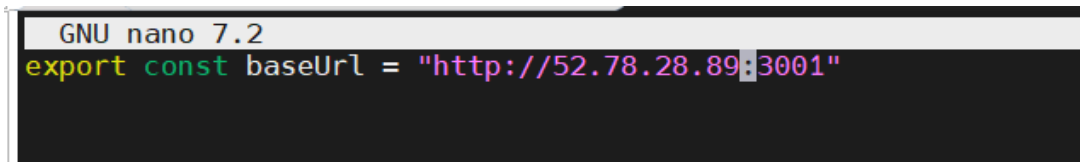
```
        server_name _;

        location / {
                # First attempt to serve request as file, then
                # as directory, then fall back to displaying a 404.
              # try_files $uri $uri/ =404;
                proxy_pass http://localhost:3000;
                proxy_http_version 1.1;
                proxy_set_header Upgrade $http_upgrade;
                proxy_set_header Connection 'upgrade';
                proxy_set_header Host $host;
                proxy_cache_bypass $http_upgrade;
        }

        # pass PHP scripts to FastCGI server
        #
```

Step 2.a: Launch the frontend instance (sonal_frontend1)

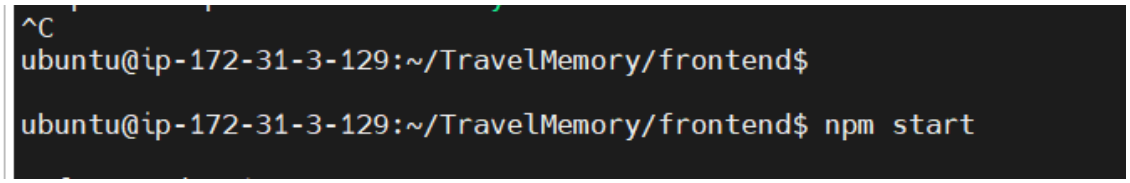
Step 2.b : Install frontend server using command “npm install”



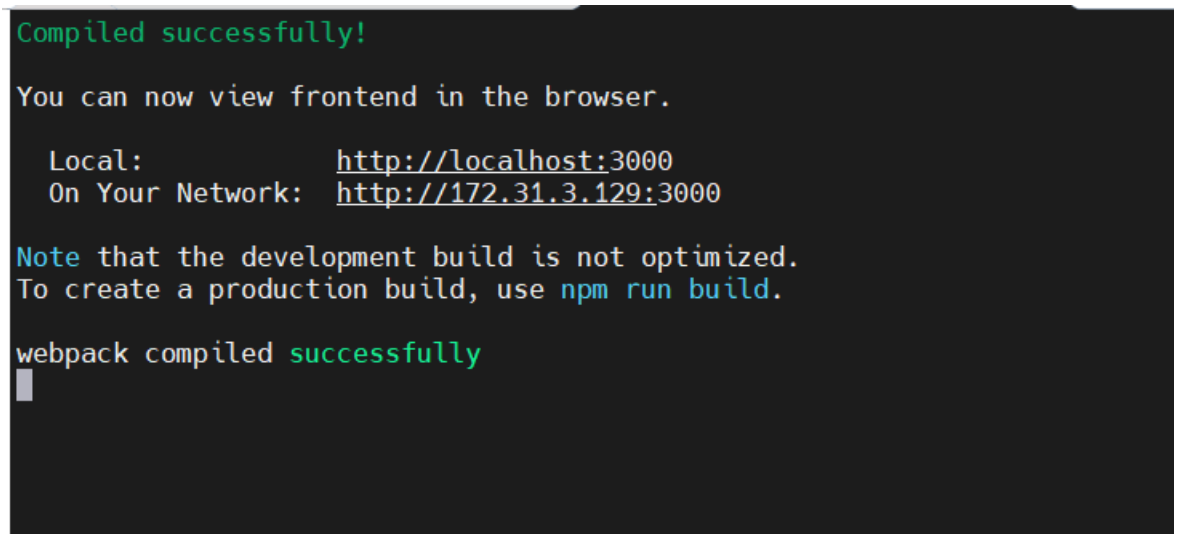
Step 2.c: Update url.js with backend IP



Step 2.d Start the frontend server with command “npm start”



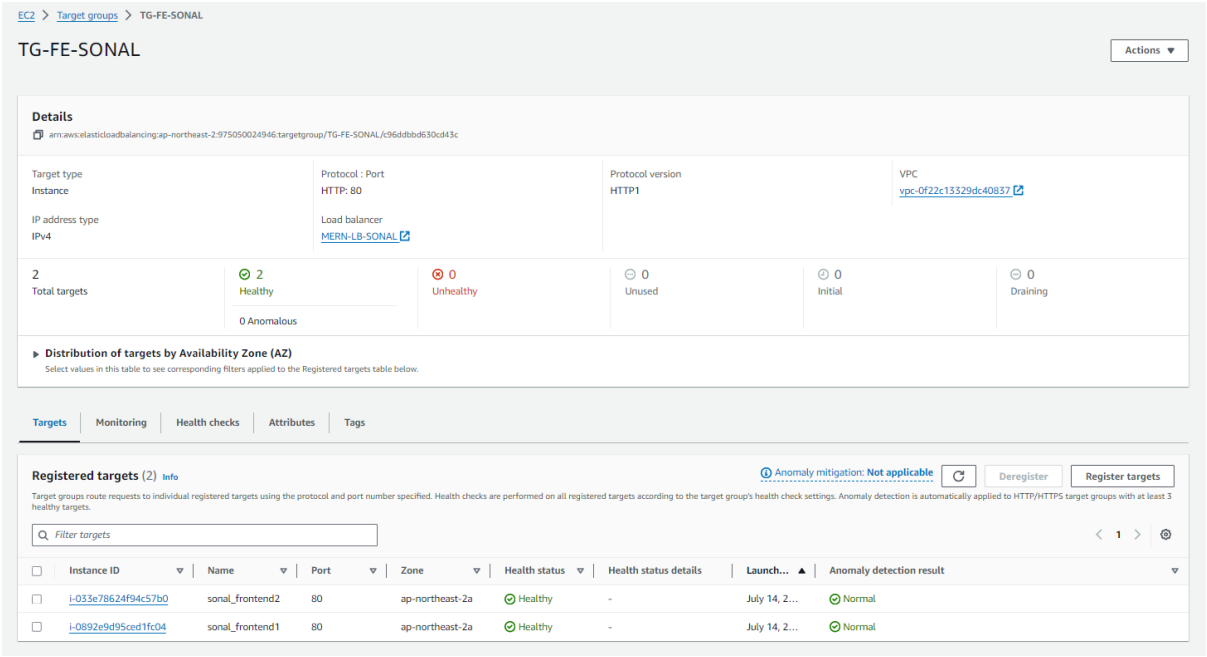
This will start the frontend server at port no-3000



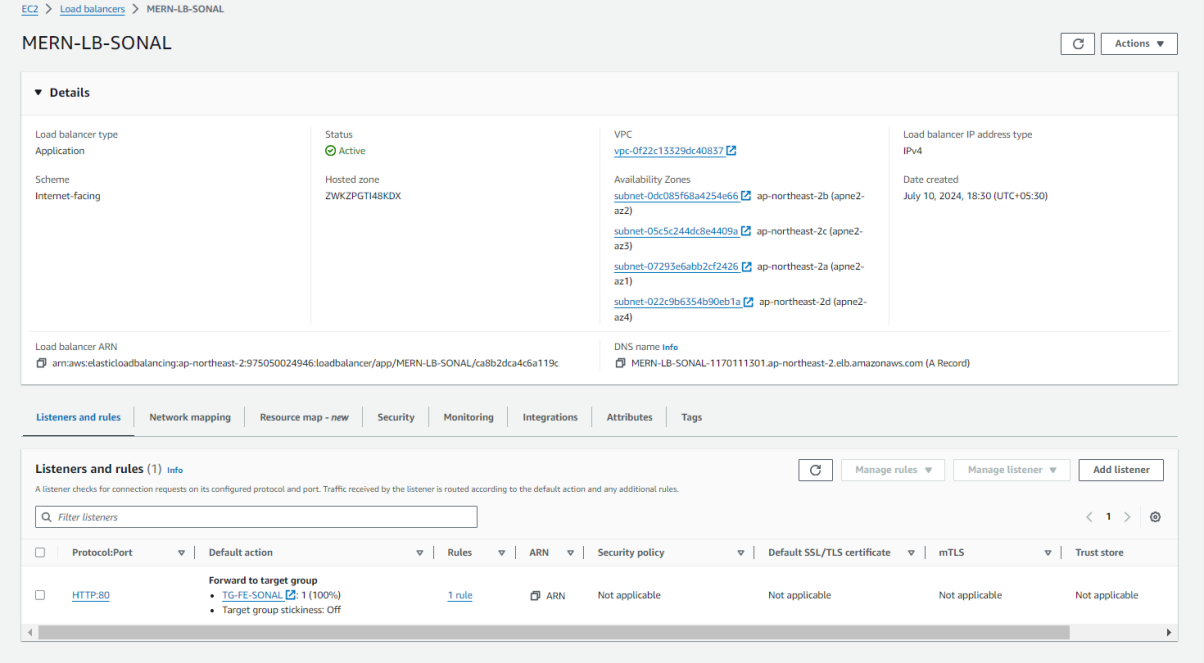
Step3: Create two AMI images from above instances.

Step4: Create a set of backend and frontend instances (sonal_backend2 and sonal_frontend2)

Step5: Create a target group "TG-FE-SONAL" and register frontend instances as below:

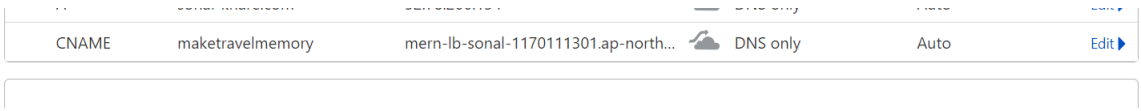


Step4: Created load balancer MERN_LB_SONAL and added listener “TG-FE-SONAL”

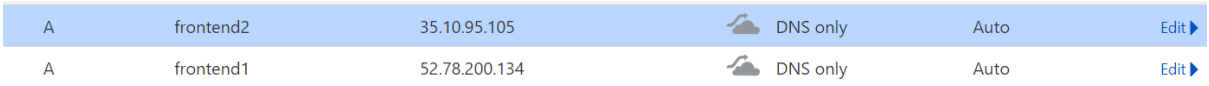


Step5: Domain Setup with Cloudflare:

1. Created a CNAME record pointing to the load balancer DNS.



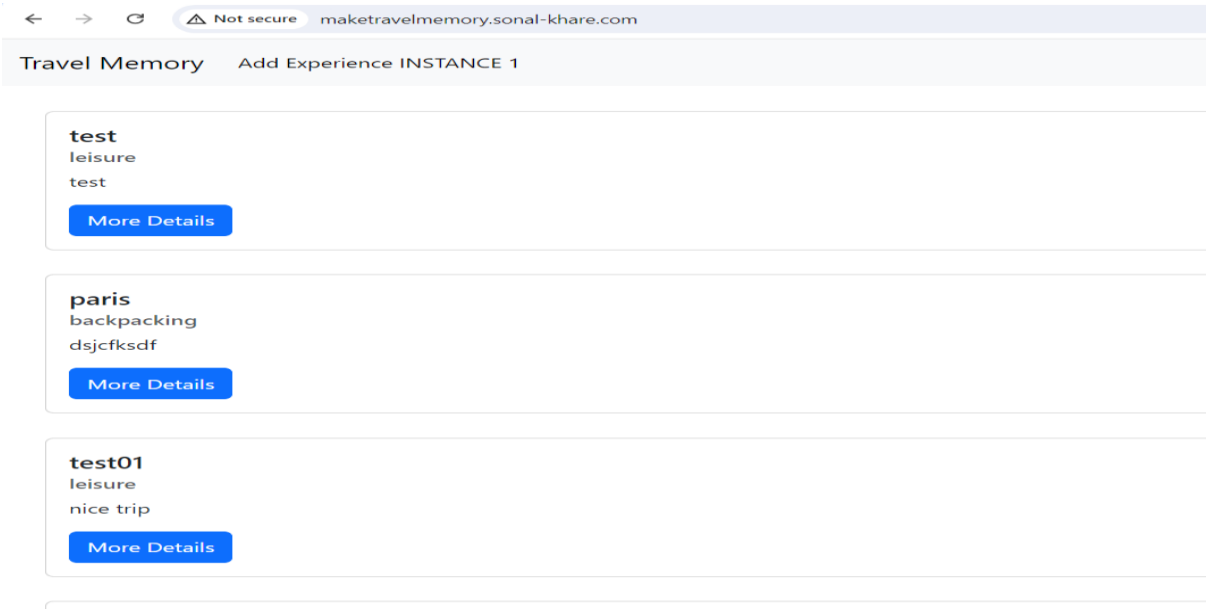
2. Create two A records pointing to frontend instances DNS.



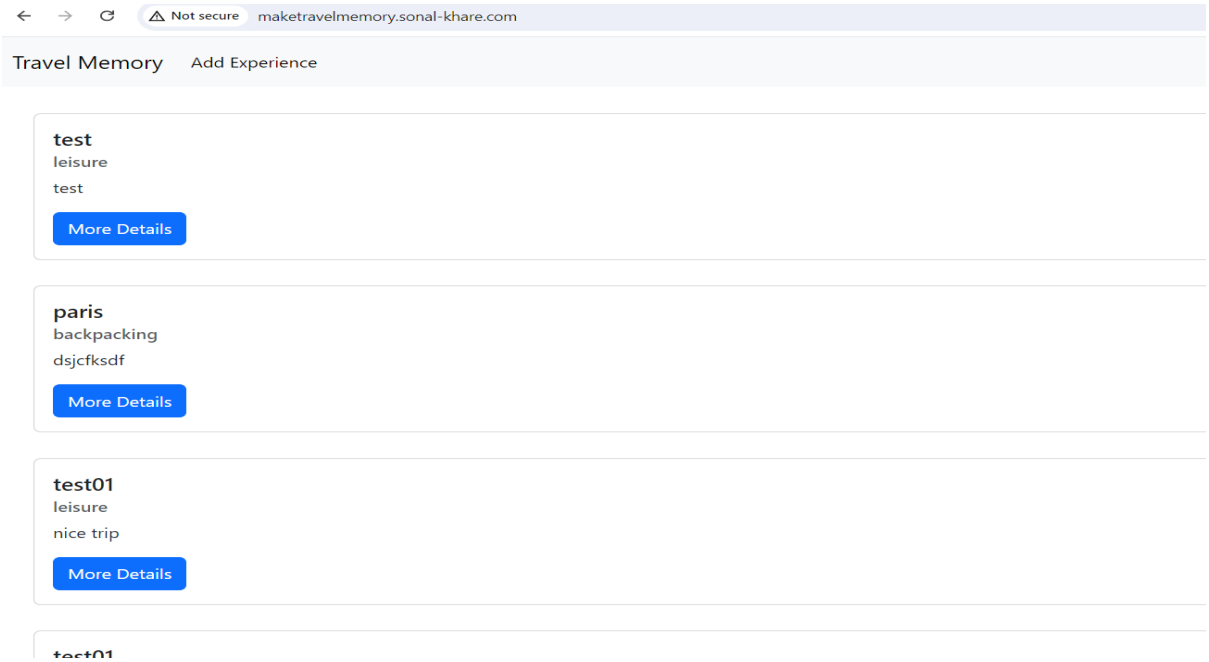
Step6: Send http://maketravelmemory.sonal-khare.com via browser or any web client multiple times:

Load balancer will redirect the request to front end instances in round robin manner.

a) First it will send the request to first frontend server.



b) Second request will be send to the second frontend server.



https://github.com/sonalbatch5/TravelMemory/