

Step 1-7

1.config site-available ของ apache2

```
GNU nano 6.2          /etc/apache2/sites-available/web1.conf
.VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

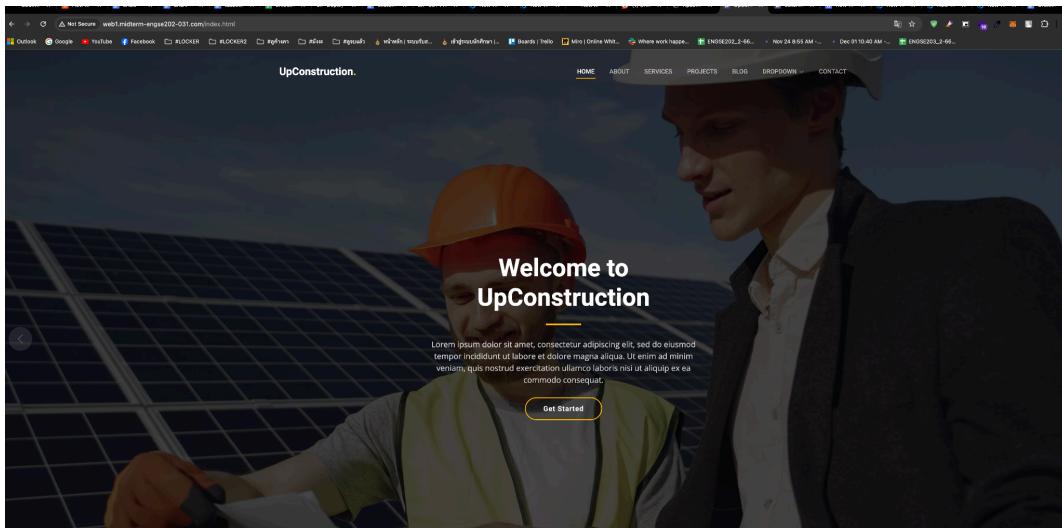
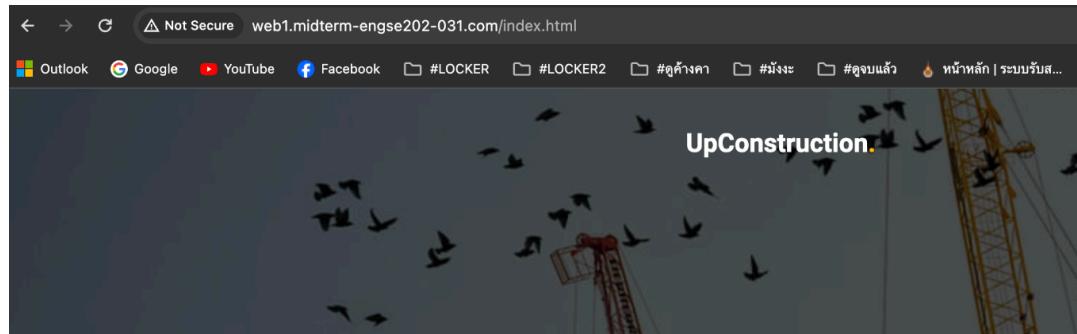
ServerAdmin webmaster@web1
DocumentRoot /var/www/web1/public_html
ServerAlias web1.midterm-engse202-031.com

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#Include conf-available/serve-cgi-bin.conf

```



2.config site-enabled ของ nginx

```
GNU nano 6.2                               /etc/nginx/sites-enabled/default
###
# You should look at the following URL's in order to grasp a solid understanding
# of Nginx configuration files in order to fully unleash the power of Nginx.
# https://www.nginx.com/resources/wiki/start/
# https://www.nginx.com/resources/wiki/start/topics/tutorials/config_pitfalls/
# https://wiki.debian.org/Nginx/DirectoryStructure
#
# In most cases, administrators will remove this file from sites-enabled/ and
# leave it as reference inside of sites-available where it will continue to be
# updated by the nginx packaging team.
#
# This file will automatically load configuration files provided by other
# applications, such as Drupal or Wordpress. These applications will be made
# available underneath a path with that package name, such as /drupal8.
#
# Please see /usr/share/doc/nginx-doc/examples/ for more detailed examples.
##

# Default server configuration
#
server {
    listen 81 default_server;
    listen [::]:81 default_server;
```

```
root /var/www/nginx/web2;

# Add index.php to the list if you are using PHP
index index.php index.html index.htm index.nginx-debian.html;

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;
}
```

3.config sites-available ของ nginx

```
GNU nano 6.2          /etc/nginx/sites-available/web2

# Default server configuration
#
server {
    listen 81 default_server;
    listen [::]:81 default_server;

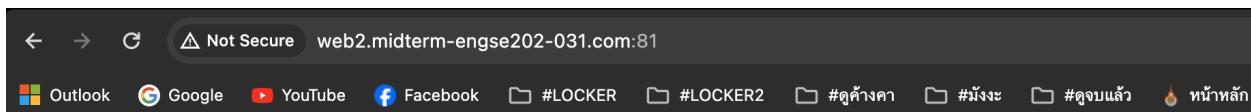
    # SSL configuration
    #
    # listen 443 ssl default_server;
    # listen [::]:443 ssl default_server;
    #
    # Note: You should disable gzip for SSL traffic.
    # See: https://bugs.debian.org/773332
    #
    # Read up on ssl_ciphers to ensure a secure configuration.
    # See: https://bugs.debian.org/765782
    #
    # Self signed certs generated by the ssl-cert package
    # Don't use them in a production server!
    #
    # include snippets/snakeoil.conf;

    root /var/www/nginx/web2;

    # Add index.php to the list if you are using PHP
    index index.php index.html index.htm index.nginx-debian.html;

    server_name web2.midterm-engse202-031.com;

    location / {
        # First attempt to serve request as file, then
        # as directory, then fall back to displaying a 404.
        try_files $uri $uri/ =404;
    }
}
```

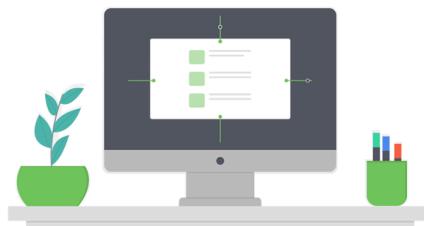


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Step8

4.config site-available ของ react app ตัวที่ 1

```
GNU nano 6.2                               react1app
# Default server configuration
#
server {
    listen 80 ;
    listen [::]:80 ;

    # SSL configuration
    #
    # listen 443 ssl default_server;
    # listen [::]:443 ssl default_server;
    #
    # Note: You should disable gzip for SSL traffic.
    # See: https://bugs.debian.org/773332
    #
    # Read up on ssl_ciphers to ensure a secure configuration.
    # See: https://bugs.debian.org/765782
    #
    # Self signed certs generated by the ssl-cert package
    # Don't use them in a production server!
    #
    # include snippets/snakeoil.conf;

    root /var/www/nginx/react1;

    # Add index.php to the list if you are using PHP
    index index.html index.htm index.nginx-debian.html;

    server_name react1.midterm-engse202-031.com;

    location / {
        proxy_pass http://127.0.0.1:3010;
        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;
        # First attempt to serve request as file, then
        # as directory, then fall back to displaying a 404.
        try_files $uri $uri/ =404;
    }

    # pass PHP scripts to FastCGI server
    #
    #location ~ \.php$ {
    #    include snippets/fastcgi-php.conf;
    #

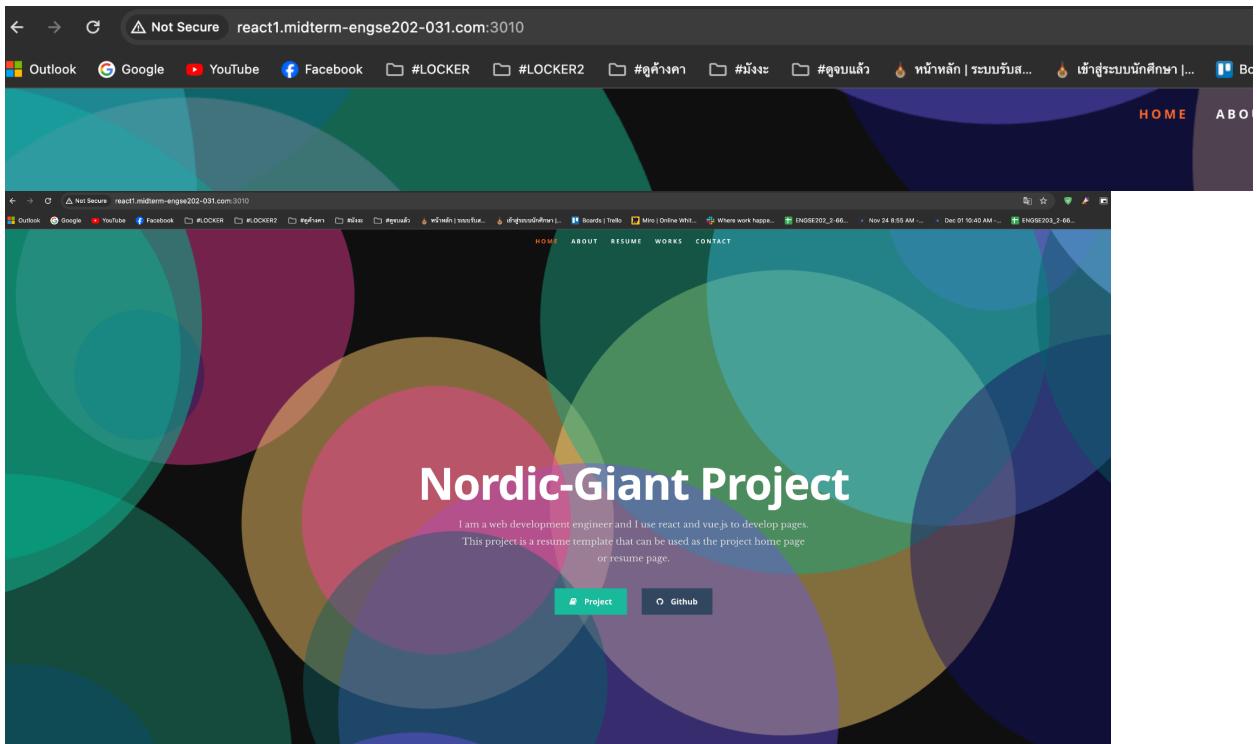
```

You can now view **reactnicerresume** in the browser.

Local: <http://localhost:3010>
On Your Network: <http://10.211.55.7:3010>

Note that the development build is not optimized.
To create a production build, use `npm run build`.

webpack compiled successfully



5.config site-available ของ react app ตัวที่ 2

```
GNU nano 6.2                               react2app
# Please see /usr/share/doc/nginx-doc/examples/ for more detailed examples.
##

# Default server configuration
#
server {
    listen 80 ;
    listen [::]:80 ;

    # SSL configuration
    #
    # listen 443 ssl default_server;
    # listen [::]:443 ssl default_server;
    #
    # Note: You should disable gzip for SSL traffic.
    # See: https://bugs.debian.org/773332
    #
    # Read up on ssl_ciphers to ensure a secure configuration.
    # See: https://bugs.debian.org/765782
    #
    # Self signed certs generated by the ssl-cert package
    # Don't use them in a production server!
    #
    # include snippets/snakeoil.conf;

    root /var/www/nginx/react2;

    # Add index.php to the list if you are using PHP
    index index.html index.htm index.nginx-debian.html;

    server_name react1.midterm-engse202-031.com;

    location / {
        proxy_pass http://127.0.0.1:3011;
        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;
        # First attempt to serve request as file, then
        # as directory, then fall back to displaying a 404.
        try_files $uri $uri/ =404;
    }

    # pass PHP scripts to FastCGI server
    #
}

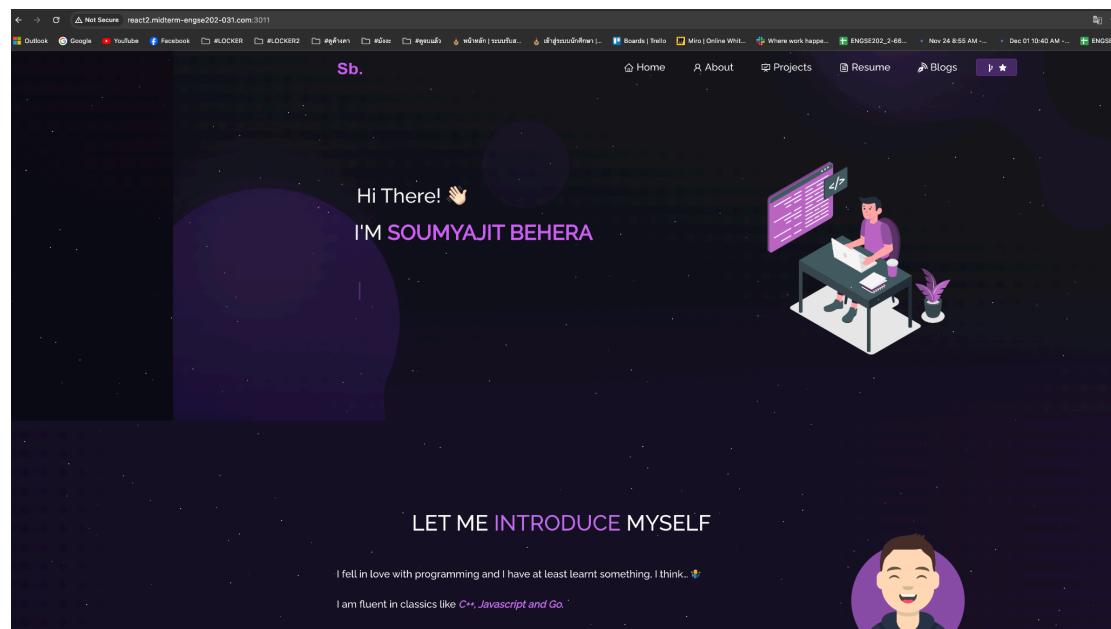
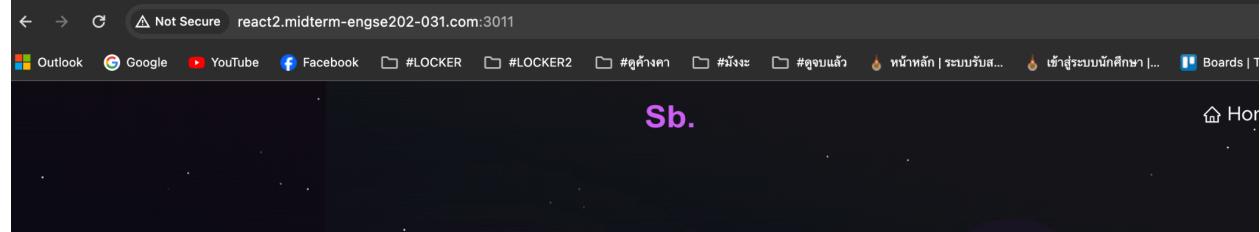
# Help      W Write Out   Where Is   Cut       Execute   Location
# Exit      R Read File   Replace   Paste     Justify   Go To Line
```

You can now view [portfolio](#) in the browser.

Local: http://localhost:3011
On Your Network: http://10.211.55.7:3011

Note that the development build is not optimized.
To create a production build, use `npm run build`.

assets by path static/media/ 1.96 MiB
 assets by info 1.85 MiB [immutable]
 assets by static/media/*.png 1.77 MiB 7 assets
 asset static/media/Behera-BIT_MESRA_b67bc39ea73918d153fd.pdf 48.3 KiB [emitted] [immutable] [from: src/Assets/Soumyajit_Behlera-BIT_MESRA.pdf] (auxiliary name: main)
 asset static/media/home-bg_dc52d5d40a40b13154b0.jpg 31.4 KiB [emitted] [immutable] [from: src/Assets/home-bg.jpg] (auxiliary name: main)
 asset static/media/pre.svg 1.88 KiB [emitted] [immutable] [from: src/Assets/media/pre.d4812f51c8c80976eaab.svg] (auxiliary name: main)
 asset static/media/home-main_541f8179af8209ce03ccf2178fe62dbf.svg 108 KiB [emitted] [auxiliary name: main]
 asset static/media/avatar_5852f40fb38aa284829fa3fb7722225.svg 12.6 KiB [emitted] (auxiliary name: main)
 assets by path static/js/*.* 19.2 MiB
 asset static/js/bundle.js 19.2 MiB [emitted] (name: main) 1 related asset
 asset static/js/vendors-node_modules_tsparticles_esm_Plugins_PolygonMask_pathseg_js.chunk.js 59.4 KiB [emitted] (id hint: vendors) 1 related asset
 asset static/js/node_modules_web-vitals_dist_web-vitals_js.chunk.js 6.92 KiB [emitted] 1 related asset
 asset index.html 1.86 KiB [emitted]
 asset asset-manifest.json 1.81 KiB [emitted]
 cached modules 17.4 MiB (javascript) 1.85 MiB (asset) 32.5 KiB (runtime) [cached] 875 modules
 webpack 5.70.0 compiled successfully in 2660 ms



Step 9, 10

1.สร้าง sites-available ของ api

```
^Croot@backend031:/var/www/lab4/server# sudo nano /etc/nginx/sites-available/apimidterm
```

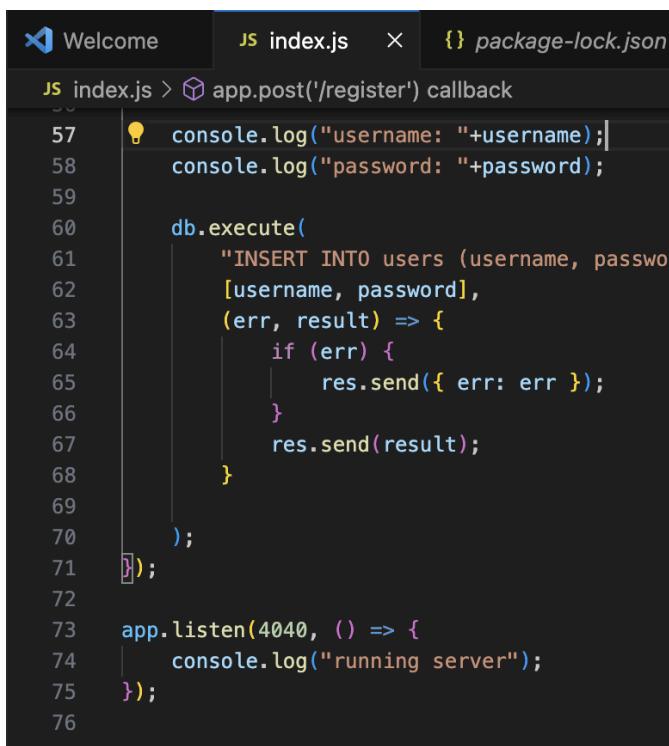
2.config ในไฟล์ตามภาพ

```
GNU nano 6.2                               /etc/nginx/sites-available/apimidterm
server {
    listen 80 ;
    listen [::]:80 ;

    server_name api.midterm-engse202-031.com;

    location / {
        proxy_pass http://127.0.0.1:4040;
        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;
    }
}
```

3.เปลี่ยน port ใน index.js ของ nodejs



The screenshot shows a code editor with three tabs: 'Welcome', 'JS index.js', and '{} package-lock.json'. The 'index.js' tab is active, displaying the following code:

```
JS index.js > app.post('/register') callback
  57   console.log("username: "+username);
  58   console.log("password: "+password);

  59   db.execute(
  60     "INSERT INTO users (username, passwo
  61     [username, password],
  62     (err, result) => {
  63       if (err) {
  64         res.send({ err: err });
  65       }
  66       res.send(result);
  67     }
  68   );
  69 );
  70 );
  71 );
  72 );
  73 app.listen(4040, () => {
  74   console.log("running server");
  75 );
  76 );
```

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4. ทำการรัน node

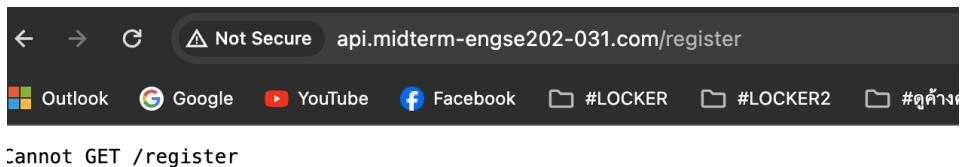
```
running server
^Croot@backend031:/var/www/lab4/server# sudo service nginx restart
root@backend031:/var/www/lab4/server# nodemon index.js
[nodemon] 3.0.2
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): ***!
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node index.js`
running server
body: {"username":"test5","password":"1234"}
username: test5
password: 1234
```

5. ทำการ config nginx.conf

```
root@backend031:/etc/nginx# sudo nano nginx.conf
```

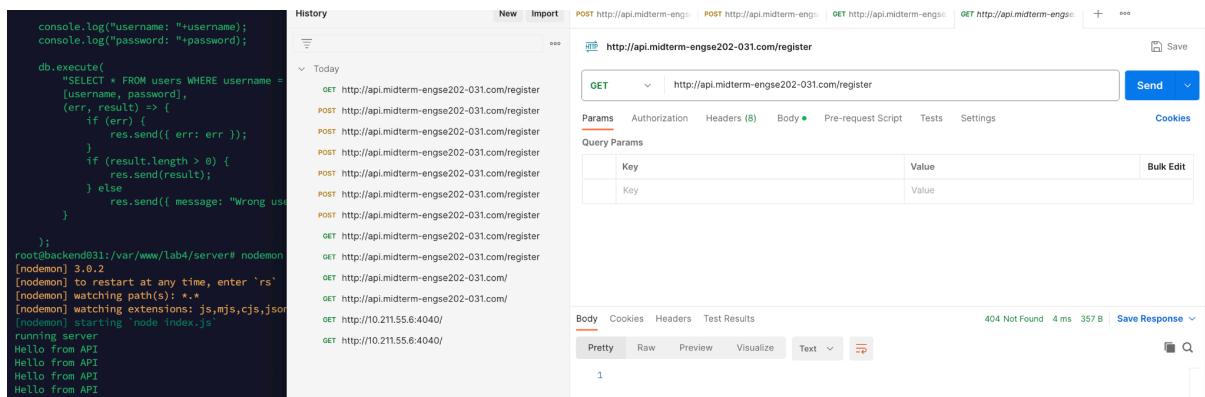
```
    include /etc/nginx/conf.d/*.conf;
    include /etc/nginx/sites-available/*;
}
```

6. ทดสอบหน้าเว็บ



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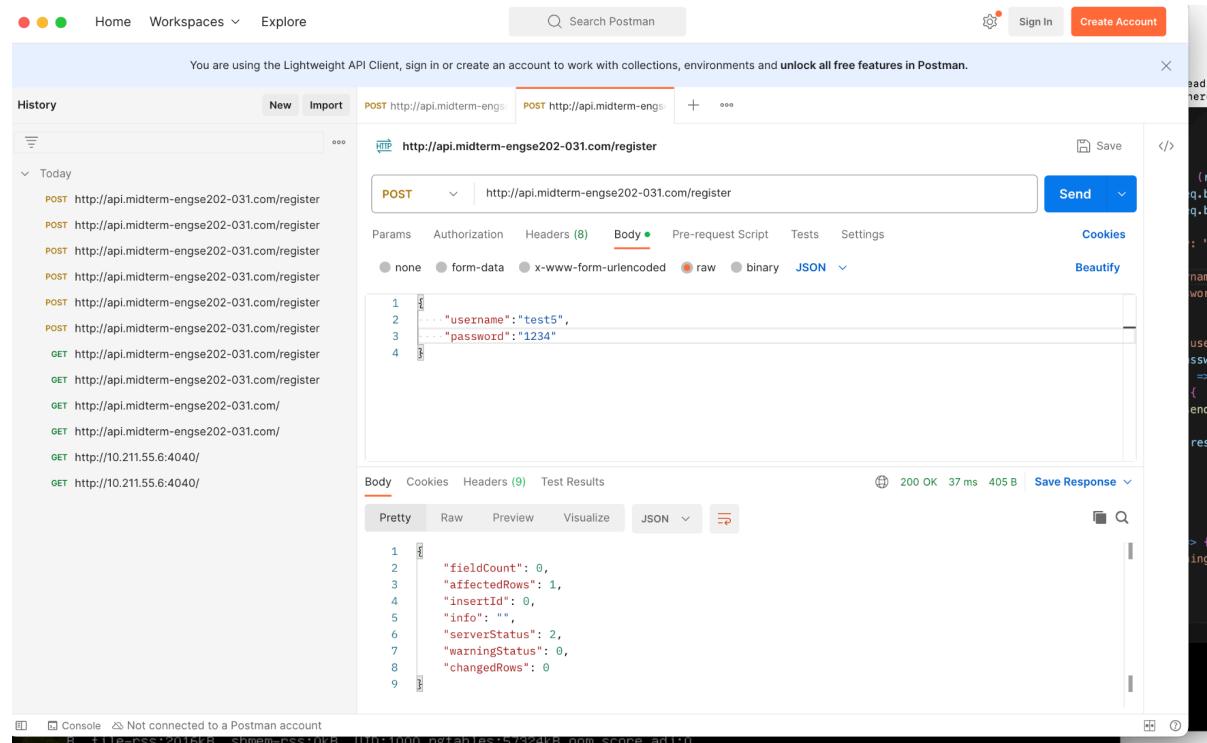
7. เช็ค api ที่ส่งมาใน postman ทั้ง get และ post



The screenshot shows the Postman interface. On the left, there is a terminal window displaying Node.js code for a database query. On the right, a request is being made to `http://api.midterm-engse202-031.com/register` using the GET method. The response status is 404 Not Found.

```
console.log("username: "+username);
console.log("password: "+password);

db.execute(
  "SELECT * FROM users WHERE username = ?",
  [username, password],
  (err, result) => {
    if (err) {
      res.send({ err: err });
    } else if (result.length > 0) {
      res.send(result);
    } else {
      res.send({ message: "Wrong user or password" });
    }
  }
);
root@backend031:/var/www/lab4/server# nodemon
[nodemon] 3.0.2
[nodemon] to restart at any time, enter `r`
[nodemon] watching path(s): ***!
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting 'node index.js'
running server
Hello from API
Hello from API
Hello from API
Hello from API
```



The screenshot shows the Postman interface. A POST request is made to `http://api.midterm-engse202-031.com/register`. The response status is 200 OK, and the response body is a JSON object:

```
1   {
2     "fieldCount": 0,
3     "affectedRows": 1,
4     "insertId": 0,
5     "info": "",
6     "serverStatus": 2,
7     "warningStatus": 0,
8     "changedRows": 0
9 }
```

Step 11.

```
supawit@webserver-66543210031:/etc/nginx/login$ cd /var/www/nginx
```

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