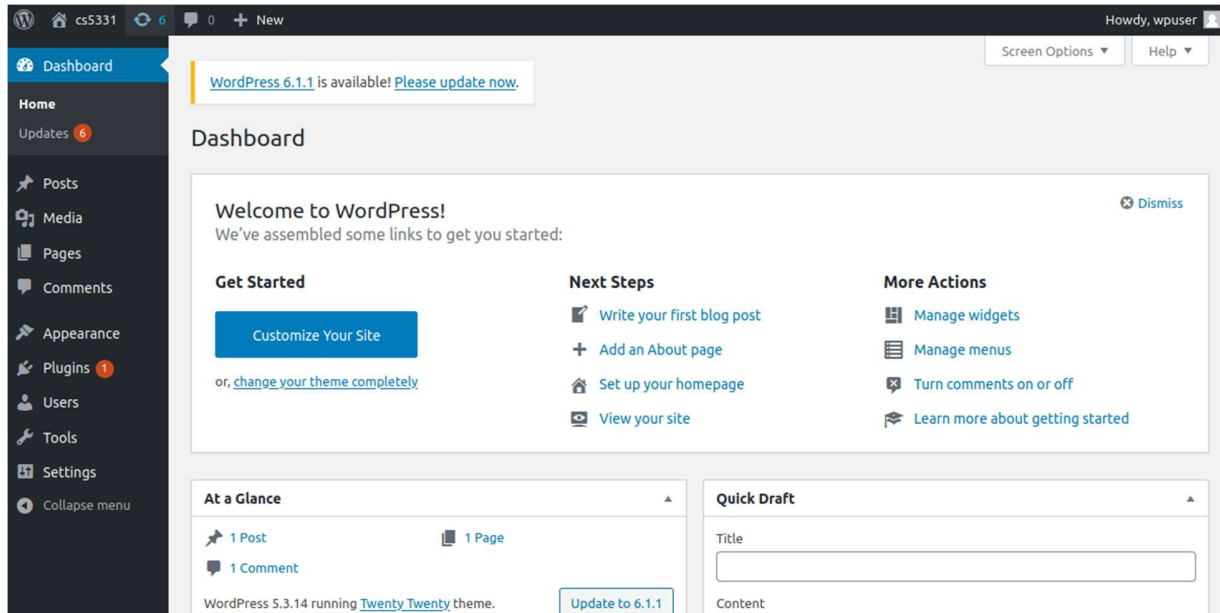


Task 1:

Screenshot of WordPress dashboard visited from web server browser.

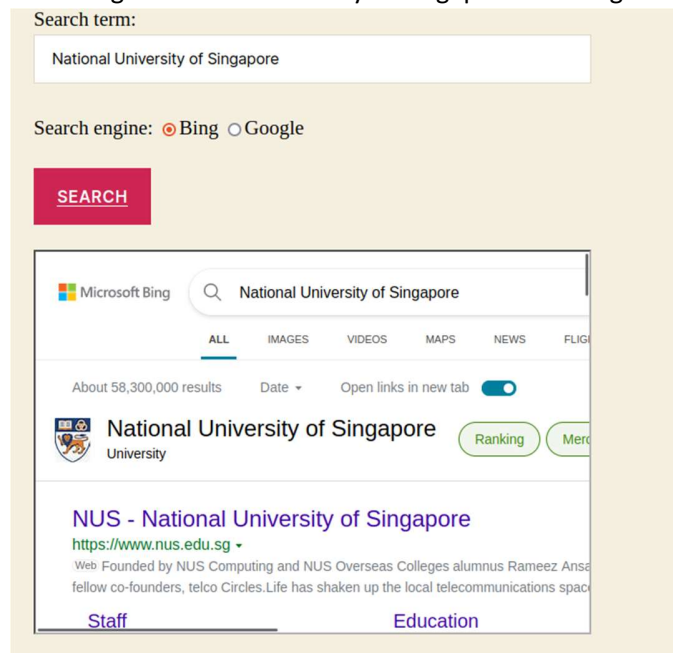


Screenshot of the wp_users table in database server

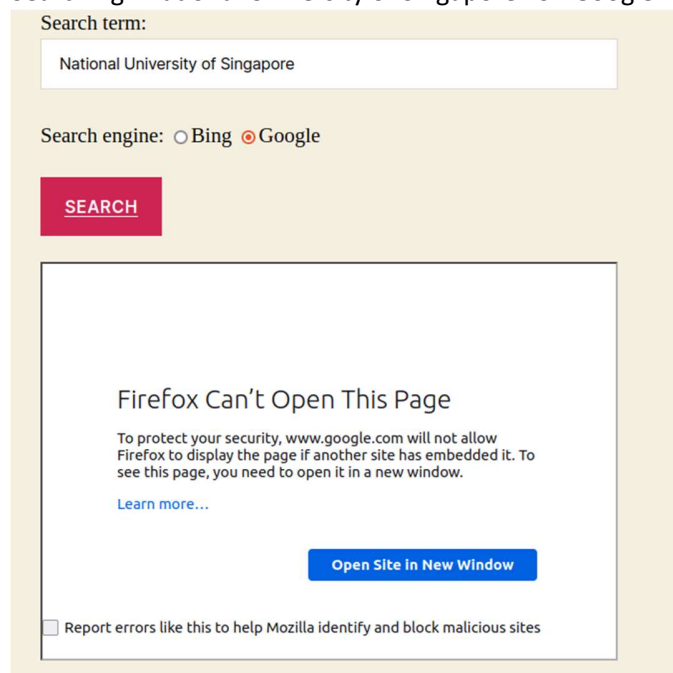
```
mysql> select * from wp_users;
+-----+-----+-----+-----+-----+-----+-----+-----+
| ID | user_login | user_pass | user_nicename | user_email | user_url | user_registered |
| user_activation_key | user_status | display_name |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | wpuser | $P$BvpAf2n9eEfyJTbc59rGD24mdvsfvE. | wpuser | spammer.at.work@gmail.com | | 2023-02-02 13:22:04 |
| | | 0 | wpuser | |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

Task 2:

Searching “National University of Singapore” on Bing



Searching “National University of Singapore” on Google



Google prevents using its search engine within an iframe and requires the search to be on a new window. This could be because Google is sending an X-Frame-Options: SAMEORIGIN response header requiring page in the frame to have the same origin as all ancestor frames.

Task 3:

In the page created, the code for task 2 is added into the wordpress page in the `<body>` tag, then nested in the `<main>` tag with the id "site-content". It is then nested in the `<div>` class "post-inner thin", then "entry-content" and lastly in the `<p>` tag. The `iframe`, which is also nested in this `<p>` tag, will then load "<https://nus-cs5331.github.io/search.html>" into the `iframe` DOM. This includes the script in `search.html` which is nested in the `<body>` and then `<script>` tag.

After clicking on the "Search" button in the page, the Javascript code first find the `iframe` element with the id "frame1", then with the `contentWindow` property, will call the `postMessage` method. Before returning the `postMessage` method, the Javascript code will check which radio button, either google or bing, has been selected using `getElementById`, then call `JSON.stringify` method to store the value associated with bing or google search engine and the text in the search term also using `getElementById` method and searching for the id "text1". This JSON data will then be stored as the "message" argument in the `postMessage` method. "*" would then be the value in "targetOrigin" argument. The `postMessage` method will then send a post message to <https://nus-cs5331.github.io/search.html> which is listening for a message sent. When a message is received and contains the correct JSON data, it will send a http GET request to either search engine with the search content.