

Project Title:

1. Generating API key and doing a Post Request to the web API.
2. Generate Time based One Time password (Referring RFC6238).

Description:

1.

Two java programs are written to do this project. "getRequest" class consist of a program that initiate the "GET" request from API. Hence the output from that program is the authentication key. "postRequest" class consist of a program that takes the authentication key to access the web API and initiates the "POST" request which post the name and email ID to the web API.

2.

Program is used to generate the 10 digit one time password with 2 factor authentications. Program takes the secret key which is going to get hashed using HMAC-SHA512 algorithm. Since, it is time based otp which means it has to be provided with counter that counts amount of time is elapsed. In order to evaluate that Unix time, TX, T0 are used.

Getting Started:

- Needs a IDE to run the two programs.
- First run the "getRequest" class to get API authentication key and then use that key to run the "postRequest" to post the requests.
- API- Keys are hidden.
- Shared Key is hidden.

Acknowledgements:

<https://dzone.com/articles/how-to-implement-get-and-post-request-through-simp>

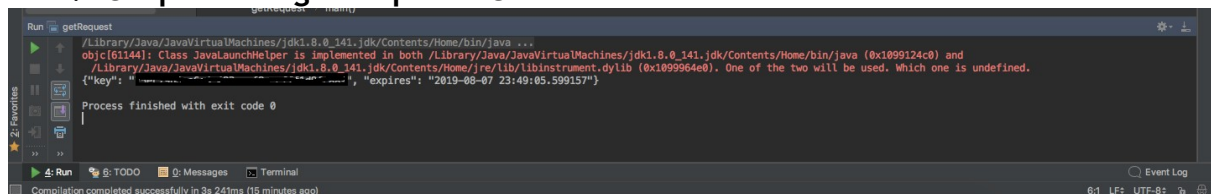
<https://www.mkyong.com/java/how-to-send-http-request-getpost-in-java/>

<https://tools.ietf.org/html/rfc6238>

<https://blog.gingerlime.com/2010/once-upon-a-time/>

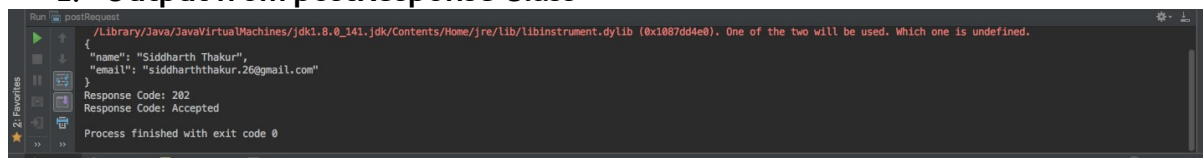
Evidences:

1. Output from getResponse Class



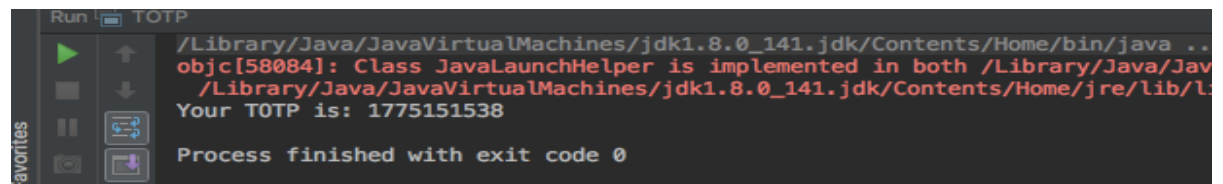
```
Run - getRequest
/Library/Java/JavaVirtualMachines/jdk1.8.0_141.jdk/Contents/Home/bin/java ...
objc[61144]: Class JavaLaunchHelper is implemented in both /Library/Java/JavaVirtualMachines/jdk1.8.0_141.jdk/Contents/Home/bin/java (0x1099124c0) and
/Library/Java/JavaVirtualMachines/jdk1.8.0_141.jdk/Contents/Home/jre/lib/libinstrument.dylib (0x1099964e0). One of the two will be used. Which one is undefined.
{"key": " ", "expires": "2019-08-07 23:49:05.599157"}
Process finished with exit code 0
Compilation completed successfully in 3s 241ms (15 minutes ago)
```

2. Output from postResponse Class



```
Run - postRequest
/Library/Java/JavaVirtualMachines/jdk1.8.0_141.jdk/Contents/Home/jre/lib/libinstrument.dylib (0x1087dd4e0). One of the two will be used. Which one is undefined.
{"name": "Siddharth Thakur", "email": "siddharththakur.26@gmail.com"}
Response Code: 202
Response Code: Accepted
Process finished with exit code 0
```

3. TOTP Output



```
Run TOTP
/Library/Java/JavaVirtualMachines/jdk1.8.0_141.jdk/Contents/Home/bin/java ..
objc[58084]: Class JavaLaunchHelper is implemented in both /Library/Java/Jav
/Library/Java/JavaVirtualMachines/jdk1.8.0_141.jdk/Contents/Home/jre/lib/l
Your TOTP is: 1775151538
Process finished with exit code 0
```