Converted dataset.log into .json file format

Before the conversion:

```
dataset.log - Notepad
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File Edit Format View Help
54.36.149.41 - - [22/Jan/2019:03:56:14 +0330] "GET /filter/27|13%20%D9%85%DA%AF%D8%A7%D9%BE%DB%&
31.56.96.51 - - [22/Jan/2019:03:56:16 +0330] "GET /image/60844/productModel/200x200 HTTP/1.1" 20
31.56.96.51 - [22/Jan/2019:03:56:16 +0330] "GET /image/61474/productModel/200x200 HTTP/1.1" 26
40.77.167.129 - - [22/Jan/2019:03:56:17 +0330] "GET /image/14925/productModel/100x100 HTTP/1.1"
91.99.72.15 - - [22/Jan/2019:03:56:17 +0330] "GET /product/31893/62100/%D8%B3%D8%B4%D9%88%D8%A7%
40.77.167.129 - - [22/Jan/2019:03:56:17 +0330] "GET /image/23488/productModel/150x150 HTTP/1.1"
40.77.167.129 - - [22/Jan/2019:03:56:18 +0330] "GET /image/45437/productModel/150x150 HTTP/1.1"
40.77.167.129 - - [22/Jan/2019:03:56:18 +0330] "GET /image/576/article/100x100 HTTP/1.1" 200 147
66.249.66.194 - - [22/Jan/2019:03:56:18 +0330] "GET /filter/b41,b665,c150%7C%D8%A8%D8%AE%D8%A7%C
40.77.167.129 - - [22/Jan/2019:03:56:18 +0330] "GET /image/57710/productModel/100x100 HTTP/1.1"
207.46.13.136 - - [22/Jan/2019:03:56:18 +0330] "GET /product/10214 HTTP/1.1" 200 39677 "-" "Mozi
40.77.167.129 - - [22/Jan/2019:03:56:19 +0330] "GET /image/578/article/100x100 HTTP/1.1" 200 983
178.253.33.51 - - [22/Jan/2019:03:56:19 +0330] "GET /m/product/32574/62991/%D9%85%D8%A7%D8%B4%DE
40.77.167.129 - - [22/Jan/2019:03:56:19 +0330] "GET /image/6229/productModel/100x100 HTTP/1.1" 2
91.99.72.15 - - [22/Jan/2019:03:56:19 +0330] "GET /product/10075/13903/%D9%85%D8%A7%DB%8C%DA%A9%
40.77.167.129 - - [22/Jan/2019:03:56:19 +0330] "GET /image/6229/productModel/150x150 HTTP/1.1" 2
207.46.13.136 - [22/Jan/2019:03:56:19 +0330] "GET /product/14926 HTTP/1.1" 404 33617 "-" "Mozi
40.77.167.129 - - [22/Jan/2019:03:56:19 +0330] "GET /image/6248/productModel/150x150 HTTP/1.1" 2
40.77.167.129 - - [22/Jan/2019:03:56:20 +0330] "GET /image/64815/productModel/150x150 HTTP/1.1"
66.249.66.194 - - [22/Jan/2019:03:56:20 +0330] "GET /m/filter/b2,p6 HTTP/1.1" 200 19451 "-" "Moz
91.99.72.15 - - [22/Jan/2019:03:56:20 +0330] "GET /product/32798/63266/%DB%8C%D8%AE%DA%86%D8%A7%
178.253.33.51 - - [22/Jan/2019:03:56:20 +0330] "GET /settings/logo HTTP/1.1" 200 4120 "https://w
66.249.66.91 - - [22/Jan/2019:03:56:20 +0330] "GET /filter/b874%2Cb32%2Cb63%2Cb99%2Cb126%2Cb820%
31.56.96.51 - - [22/Jan/2019:03:56:20 +0330] "GET /image/60819/productModel/200x200 HTTP/1.1" 20
31.56.96.51 - - [22/Jan/2019:03:56:20 +0330] "GET /image/60847/productModel/200x200 HTTP/1.1" 20
178.253.33.51 - - [22/Jan/2019:03:56:21 +0330] "GET /image/32574?name=pr465at.jpg&wh=max HTTP/1.
5.78.198.52 - - [22/Jan/2019:03:56:21 +0330] "GET /m/product/33978/64784/%DA%AF%D9%88%D8%B4%DB%&
178.253.33.51 - [22/Jan/2019:03:56:21 +0330] "GET /image/32574?name=pr465at3.jpg&wh=max HTTP/1
207.46.13.136 - [22/Jan/2019:03:56:21 +0330] "GET /product/30649?model=60398 HTTP/1.1" 200 411
```

After, used a script to convert the Common Log Format information into a .json format. Technique used to parse the data was regex as the data in Common Log Format was all the same for each line of information. The regex implentation seperated the information into 8 different catagories/fields, "IP_of_requesting_host", "Remote_user", "Timestamp", "Request_from_client", "HTTP_response_code", "Size_of_bytes_returned", "Http_referer", and "Http_user_agent":

After parsing dataset.log we export it as a .json file as stated on the assignment:

```
final.json - Notepad
                                                                                          X
File Edit Format View Help
    "IP of requesting host": "31.56.96.51",
    "Remote_user": "-",
    "Timestamp": "22/Jan/2019:03:56:20 +0330",
    "Request from client": "GET /image/60819/productModel/200x200 HTTP/1.1",
    "HTTP response_code": "200",
    "Size_of_bytes_returned": "7171",
    "Http referer": "https://www.zanbil.ir/m/filter/b113",
    "Http user agent": "Mozilla/5.0 (Linux; Android 6.0; ALE-L21 Build/HuaweiALE-L21) AppleWebKi
 },
    "IP of requesting_host": "31.56.96.51",
    "Remote_user": "-",
    "Timestamp": "22/Jan/2019:03:56:20 +0330",
    "Request_from_client": "GET /image/60847/productModel/200x200 HTTP/1.1",
    "HTTP_response_code": "200",
    "Size of bytes returned": "5667",
    "Http referer": "https://www.zanbil.ir/m/filter/b113",
    "Http user agent": "Mozilla/5.0 (Linux; Android 6.0; ALE-L21 Build/HuaweiALE-L21) AppleWebKi
  },
    "IP_of_requesting_host": "178.253.33.51",
    "Remote_user": "-",
    "Timestamp": "22/Jan/2019:03:56:21 +0330",
    "Request_from_client": "GET /image/32574?name=pr465at.jpg&wh=max HTTP/1.1",
    "HTTP_response_code": "200",
    "Size_of_bytes_returned": "28825",
    "Http referer": "https://www.zanbil.ir/m/product/32574/62991/%D9%85%D8%A7%D8%B4%DB%8C%D9%86-
    "Http user agent": "Mozilla/5.0 (Linux; Android 5.1; HTC Desire 728 dual sim) AppleWebKit/53
<
```

Created a script that reads .json and prints out a desired field

Coded a python script that will take the .json file that was created in the previous step and output the information for a desired field by the user.

User enters "Timestamp":

PS C:\Users\fireb\Desktop\Coding Projects\Python Folder> python -u "c:\Users\fireb\Desktop\Coding Projects\Python Folder\.vscode\Lab8\script.py"

Please enter a field of your choice: 1) IP of_requesting host 2) Remote_user 3) Remote_user 4) Request_from_client 5) HTTP_response_code 6) Size_of_bytes_return ed 7) Http_referer 8) Http_user_agent: Timestamp

Output:

PS C:\Users\fireb\Desktop\Coding Projects\Python Folder> python -u "c:\Users\fireb\Desktop\Coding Projects\Python Folder\.vscode\Lab8\script.py"

Please enter a field of your choice: 1) IP_of_requesting_host 2) Remote_user 3) Remote_user 4) Request_from_client 5) HTTP_response_code 6) Size_of_bytes_return
ed 7) Http_referer 8) Http_user_agent: Timestamp

All the results of the field Timestamp: 22/Jan/2019:03:56:14 +0330, 22/Jan/2019:03:56:16 +0330, 22/Jan/2019:03:56:16 +0330, 22/Jan/2019:03:56:17 +0330, 22/Jan/2019:03:56:18 +0330, 22/Jan/2019:03:56:19 +0330, 22/Jan/2019:03:56:19 +0330, 22/Jan/2019:03:56:19 +0330, 22/Jan/2019:03:56:19 +0330, 22/Jan/2019:03:56:19 +0330, 22/Jan/2019:03:56:19 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56:21 +0330, 22/Jan/2019:03:56:20 +0330, 22/Jan/2019:03:56: