

Консоль

Задание 1

Команда или последовательность команд, которой удалось получить нужные логи:

```
$ grep -R "^233.201.*" ~/logs/2019/12
```

Логи:

```
/home/morty/logs/2019/12/apache_2019-12-18.txt:233.201.188.154 - - [18/12/2019:21:46:01  
+0000] "DELETE /events HTTP/1.1" 403 3971  
/home/morty/logs/2019/12/apache_2019-12-21.txt:233.201.182.9 - - [21/12/2019:21:56:20  
+0000] "PATCH /users HTTP/1.1" 400 4118
```

Задание 2

Команды, которые создают директории bug1 и events:

```
$ cd
```

```
$ mkdir bug1
```

```
$ mkdir bug1/events
```

Команда, которой выбираешь запросы за указанный период. Это те запросы, которыми ты отбираешь логи в файл main.txt:

```
$ cd
```

```
$ grep -R '3[01]/12/2019:21:3' ~/logs/2019/12 > ~/bug1/main.txt
```

Команды, которыми ты кладёшь логи в файлы 400.txt и 500.txt из main.txt:

```
$ grep -w '400' ~/bug1/main.txt > ~/bug1/events/400.txt
```

```
$ grep -w '500' ~/bug1/main.txt > ~/bug1/events/500.txt
```

400.txt

\$ cat bug1/events/400.txt/home/morty/logs/2019/12/apache_2019-12-31.txt:86.34.86.182 - - [31/12/2019:21:35:10 +0000] "POST /auth HTTP/1.1" 400 3626

/home/morty/logs/2019/12/apache_2019-12-31.txt:167.37.16.117 - - [31/12/2019:21:35:17 +0000] "PATCH /customers HTTP/1.1" 400 3294

/home/morty/logs/2019/12/apache_2019-12-31.txt:199.128.92.19 - - [31/12/2019:21:35:43 +0000] "PUT /users HTTP/1.1" 400 4180

/home/morty/logs/2019/12/apache_2019-12-31.txt:162.152.99.143 - - [31/12/2019:21:35:59 +0000] "PUT /users HTTP/1.1" 400 4606

/home/morty/logs/2019/12/apache_2019-12-31.txt:83.115.59.224 - - [31/12/2019:21:37:26 +0000] "GET /alerts HTTP/1.1" 400 3489

/home/morty/logs/2019/12/apache_2019-12-31.txt:194.10.97.226 - - [31/12/2019:21:37:31 +0000] "DELETE /lists HTTP/1.1" 400 2447

/home/morty/logs/2019/12/apache_2019-12-31.txt:180.99.214.40 - - [31/12/2019:21:37:44 +0000] "DELETE /alerts HTTP/1.1" 400 2077

/home/morty/logs/2019/12/apache_2019-12-31.txt:154.152.205.4 - - [31/12/2019:21:37:50 +0000] "GET /playbooks HTTP/1.1" 400 3324

/home/morty/logs/2019/12/apache_2019-12-31.txt:197.82.125.54 - - [31/12/2019:21:37:52 +0000] "PUT /fieldsets HTTP/1.1" 400 4365

/home/morty/logs/2019/12/apache_2019-12-31.txt:115.89.87.219 - - [31/12/2019:21:38:06 +0000] "PUT /playbooks HTTP/1.1" 400 2589

/home/morty/logs/2019/12/apache_2019-12-31.txt:100.77.15.14 - - [31/12/2019:21:38:07 +0000] "GET /fieldsets HTTP/1.1" 400 4911

/home/morty/logs/2019/12/apache_2019-12-31.txt:22.33.159.242 - - [31/12/2019:21:38:07 +0000] "GET /playbooks HTTP/1.1" 400 3955

/home/morty/logs/2019/12/apache_2019-12-31.txt:149.148.229.11 - - [31/12/2019:21:39:16 +0000] "GET /users HTTP/1.1" 400 2071

/home/morty/logs/2019/12/apache_2019-12-31.txt:236.107.64.192 - - [31/12/2019:21:39:17 +0000] "PATCH /users HTTP/1.1" 400 2791

/home/morty/logs/2019/12/apache_2019-12-31.txt:24.156.105.39 - - [31/12/2019:21:39:23 +0000] "GET /lists HTTP/1.1" 400 2902

/home/morty/logs/2019/12/apache_2019-12-31.txt:193.50.164.254 - - [31/12/2019:21:39:23 +0000] "PUT /playbooks HTTP/1.1" 400 3296

/home/morty/logs/2019/12/apache_2019-12-31.txt:18.123.104.91 - - [31/12/2019:21:39:52 +0000] "GET /collectors HTTP/1.1" 400 4372

/home/morty/logs/2019/12/apache_2019-12-31.txt:234.218.148.4 - - [31/12/2019:21:39:54
+0000] "PUT /users HTTP/1.1" 400 2509

/home/morty/logs/2019/12/apache_2019-12-30.txt:80.57.170.51 - - [30/12/2019:21:35:12
+0000] "DELETE /users HTTP/1.1" 400 3623

/home/morty/logs/2019/12/apache_2019-12-30.txt:204.235.176.118 - - [30/12/2019:21:35:13
+0000] "POST /users HTTP/1.1" 400 4704

/home/morty/logs/2019/12/apache_2019-12-30.txt:82.95.203.67 - - [30/12/2019:21:35:19
+0000] "DELETE /lists HTTP/1.1" 400 3737

/home/morty/logs/2019/12/apache_2019-12-30.txt:155.242.215.46 - - [30/12/2019:21:35:38
+0000] "POST /playbooks HTTP/1.1" 400 4450

/home/morty/logs/2019/12/apache_2019-12-30.txt:189.176.85.0 - - [30/12/2019:21:35:39
+0000] "PATCH /alerts HTTP/1.1" 400 2732

/home/morty/logs/2019/12/apache_2019-12-30.txt:13.108.71.71 - - [30/12/2019:21:35:43
+0000] "PATCH /events HTTP/1.1" 400 3410

/home/morty/logs/2019/12/apache_2019-12-30.txt:195.213.133.182 - - [30/12/2019:21:35:46
+0000] "PUT /customers HTTP/1.1" 400 3085

/home/morty/logs/2019/12/apache_2019-12-30.txt:235.243.133.78 - - [30/12/2019:21:35:47
+0000] "PATCH /customers HTTP/1.1" 400 3264

/home/morty/logs/2019/12/apache_2019-12-30.txt:192.57.115.49 - - [30/12/2019:21:35:55
+0000] "POST /parsers HTTP/1.1" 400 2457

/home/morty/logs/2019/12/apache_2019-12-30.txt:71.0.49.244 - - [30/12/2019:21:35:55
+0000] "PUT /collectors HTTP/1.1" 400 2785

/home/morty/logs/2019/12/apache_2019-12-30.txt:224.159.206.126 - - [30/12/2019:21:36:02
+0000] "DELETE /customers HTTP/1.1" 400 4569

/home/morty/logs/2019/12/apache_2019-12-30.txt:131.35.106.246 - - [30/12/2019:21:36:04
+0000] "DELETE /lists HTTP/1.1" 400 2578

/home/morty/logs/2019/12/apache_2019-12-30.txt:216.24.42.208 - - [30/12/2019:21:36:06
+0000] "GET /parsers HTTP/1.1" 400 4597

/home/morty/logs/2019/12/apache_2019-12-30.txt:123.53.150.160 - - [30/12/2019:21:37:19
+0000] "PATCH /events HTTP/1.1" 400 4379

/home/morty/logs/2019/12/apache_2019-12-30.txt:61.129.127.103 - - [30/12/2019:21:37:32
+0000] "GET /lists HTTP/1.1" 400 2575

/home/morty/logs/2019/12/apache_2019-12-30.txt:90.216.4.78 - - [30/12/2019:21:37:34
+0000] "PATCH /lists HTTP/1.1" 400 3899

/home/morty/logs/2019/12/apache_2019-12-30.txt:204.250.214.208 - - [30/12/2019:21:37:36+0000] "PATCH /parsers HTTP/1.1" 400 4742

/home/morty/logs/2019/12/apache_2019-12-30.txt:79.214.240.98 - - [30/12/2019:21:37:37+0000] "POST /fieldsets HTTP/1.1" 400 4441

/home/morty/logs/2019/12/apache_2019-12-30.txt:65.47.42.12 - - [30/12/2019:21:37:39+0000] "PATCH /customers HTTP/1.1" 400 2500

/home/morty/logs/2019/12/apache_2019-12-30.txt:251.118.141.34 - - [30/12/2019:21:37:41+0000] "POST /customers HTTP/1.1" 400 3519

/home/morty/logs/2019/12/apache_2019-12-30.txt:205.20.166.196 - - [30/12/2019:21:37:51+0000] "POST /users HTTP/1.1" 400 4032

/home/morty/logs/2019/12/apache_2019-12-30.txt:156.217.3.46 - - [30/12/2019:21:37:52+0000] "PATCH /parsers HTTP/1.1" 400 2020

/home/morty/logs/2019/12/apache_2019-12-30.txt:48.240.198.167 - - [30/12/2019:21:37:57+0000] "PATCH /playbooks HTTP/1.1" 400 4100

/home/morty/logs/2019/12/apache_2019-12-30.txt:101.255.159.211 - - [30/12/2019:21:37:59+0000] "GET /auth HTTP/1.1" 400 2324

/home/morty/logs/2019/12/apache_2019-12-30.txt:80.76.98.203 - - [30/12/2019:21:38:00+0000] "POST /playbooks HTTP/1.1" 400 3045

/home/morty/logs/2019/12/apache_2019-12-30.txt:85.64.63.255 - - [30/12/2019:21:38:13+0000] "PATCH /collectors HTTP/1.1" 400 2291

/home/morty/logs/2019/12/apache_2019-12-30.txt:184.79.247.161 - - [30/12/2019:21:38:13+0000] "PUT /alerts HTTP/1.1" 400 3557

/home/morty/logs/2019/12/apache_2019-12-30.txt:93.2.134.22 - - [30/12/2019:21:39:39+0000] "DELETE /alerts HTTP/1.1" 400 3701

500.txt

\$ cat bug1/events/500.txt

/home/morty/logs/2019/12/apache_2019-12-31.txt:208.205.133.127 - - [31/12/2019:21:35:17+0000] "DELETE /alerts HTTP/1.1" 500 4561

/home/morty/logs/2019/12/apache_2019-12-31.txt:20.145.255.91 - - [31/12/2019:21:35:30+0000] "GET /parsers HTTP/1.1" 500 3051

/home/morty/logs/2019/12/apache_2019-12-31.txt:91.66.134.13 - - [31/12/2019:21:35:53+0000] "POST /lists HTTP/1.1" 500 3319

/home/morty/logs/2019/12/apache_2019-12-31.txt:31.88.211.206 - - [31/12/2019:21:35:57+0000] "DELETE /events HTTP/1.1" 500 2325

/home/morty/logs/2019/12/apache_2019-12-31.txt:171.37.114.114 - - [31/12/2019:21:37:39
+0000] "DELETE /fieldsets HTTP/1.1" 500 3253

/home/morty/logs/2019/12/apache_2019-12-31.txt:223.157.242.167 - - [31/12/2019:21:37:59
+0000] "POST /users HTTP/1.1" 500 2283

/home/morty/logs/2019/12/apache_2019-12-31.txt:98.181.102.34 - - [31/12/2019:21:38:06
+0000] "PATCH /fieldsets HTTP/1.1" 500 4672

/home/morty/logs/2019/12/apache_2019-12-31.txt:254.74.22.79 - - [31/12/2019:21:38:06
+0000] "PUT /lists HTTP/1.1" 500 2259

/home/morty/logs/2019/12/apache_2019-12-31.txt:103.46.238.3 - - [31/12/2019:21:38:09
+0000] "PUT /lists HTTP/1.1" 500 3992

/home/morty/logs/2019/12/apache_2019-12-31.txt:41.62.205.107 - - [31/12/2019:21:39:20
+0000] "PATCH /alerts HTTP/1.1" 500 3631

/home/morty/logs/2019/12/apache_2019-12-31.txt:22.53.105.197 - - [31/12/2019:21:39:31
+0000] "DELETE /collectors HTTP/1.1" 500 4202

/home/morty/logs/2019/12/apache_2019-12-31.txt:178.22.133.42 - - [31/12/2019:21:39:43
+0000] "PUT /alerts HTTP/1.1" 500 4648

/home/morty/logs/2019/12/apache_2019-12-31.txt:102.247.13.50 - - [31/12/2019:21:39:55
+0000] "PATCH /auth HTTP/1.1" 500 3736

/home/morty/logs/2019/12/apache_2019-12-30.txt:64.250.112.189 - - [30/12/2019:21:35:13
+0000] "PUT /parsers HTTP/1.1" 500 4639

/home/morty/logs/2019/12/apache_2019-12-30.txt:193.253.101.180 - - [30/12/2019:21:35:31
+0000] "PATCH /alerts HTTP/1.1" 500 2944

/home/morty/logs/2019/12/apache_2019-12-30.txt:197.106.117.194 - - [30/12/2019:21:35:31
+0000] "PATCH /parsers HTTP/1.1" 500 3519

/home/morty/logs/2019/12/apache_2019-12-30.txt:247.124.71.67 - - [30/12/2019:21:35:45
+0000] "PUT /alerts HTTP/1.1" 500 2746

/home/morty/logs/2019/12/apache_2019-12-30.txt:62.88.204.119 - - [30/12/2019:21:35:51
+0000] "PUT /auth HTTP/1.1" 500 2666

/home/morty/logs/2019/12/apache_2019-12-30.txt:125.156.142.26 - - [30/12/2019:21:36:01
+0000] "PATCH /events HTTP/1.1" 500 3460

/home/morty/logs/2019/12/apache_2019-12-30.txt:144.170.212.70 - - [30/12/2019:21:36:04
+0000] "DELETE /parsers HTTP/1.1" 500 2599

/home/morty/logs/2019/12/apache_2019-12-30.txt:59.39.200.252 - - [30/12/2019:21:36:05
+0000] "GET /alerts HTTP/1.1" 500 2650

/home/morty/logs/2019/12/apache_2019-12-30.txt:150.136.200.100 - - [30/12/2019:21:37:24+0000] "POST /lists HTTP/1.1" 500 2684

/home/morty/logs/2019/12/apache_2019-12-30.txt:84.81.25.45 - - [30/12/2019:21:37:25+0000] "POST /auth HTTP/1.1" 500 2052

/home/morty/logs/2019/12/apache_2019-12-30.txt:30.222.160.141 - - [30/12/2019:21:37:30+0000] "PATCH /parsers HTTP/1.1" 500 2017

/home/morty/logs/2019/12/apache_2019-12-30.txt:117.87.158.36 - - [30/12/2019:21:37:34+0000] "POST /fieldsets HTTP/1.1" 500 4056

/home/morty/logs/2019/12/apache_2019-12-30.txt:212.153.128.212 - - [30/12/2019:21:37:42+0000] "PUT /fieldsets HTTP/1.1" 500 3259

/home/morty/logs/2019/12/apache_2019-12-30.txt:58.188.83.217 - - [30/12/2019:21:37:46+0000] "POST /playbooks HTTP/1.1" 500 3947

/home/morty/logs/2019/12/apache_2019-12-30.txt:193.123.131.146 - - [30/12/2019:21:37:47+0000] "PUT /lists HTTP/1.1" 500 3902

/home/morty/logs/2019/12/apache_2019-12-30.txt:182.7.179.91 - - [30/12/2019:21:37:48+0000] "GET /users HTTP/1.1" 500 2950

/home/morty/logs/2019/12/apache_2019-12-30.txt:10.25.168.164 - - [30/12/2019:21:38:05+0000] "PATCH /playbooks HTTP/1.1" 500 3858

/home/morty/logs/2019/12/apache_2019-12-30.txt:215.201.210.173 - - [30/12/2019:21:38:11+0000] "PATCH /customers HTTP/1.1" 500 3277

/home/morty/logs/2019/12/apache_2019-12-30.txt:179.241.103.167 - - [30/12/2019:21:39:23+0000] "POST /lists HTTP/1.1" 500 3669

/home/morty/logs/2019/12/apache_2019-12-30.txt:147.188.170.252 - - [30/12/2019:21:39:33+0000] "POST /fieldsets HTTP/1.1" 500 3313

/home/morty/logs/2019/12/apache_2019-12-30.txt:1.249.123.189 - - [30/12/2019:21:39:36+0000] "PATCH /alerts HTTP/1.1" 500 4734

/home/morty/logs/2019/12/apache_2019-12-30.txt:124.114.135.105 - - [30/12/2019:21:39:41+0000] "PATCH /customers HTTP/1.1" 500 3348

/home/morty/logs/2019/12/apache_2019-12-30.txt:35.215.100.202 - - [30/12/2019:21:39:43+0000] "PUT /alerts HTTP/1.1" 500 4345

/home/morty/logs/2019/12/apache_2019-12-30.txt:86.222.23.128 - - [30/12/2019:21:39:44+0000] "PATCH /alerts HTTP/1.1" 500 2230

/home/morty/logs/2019/12/apache_2019-12-30.txt:20.161.75.95 - - [30/12/2019:21:39:48+0000] "DELETE /users HTTP/1.1" 500 2412

```
/home/morty/logs/2019/12/apache_2019-12-30.txt:196.18.151.117 - - [30/12/2019:21:39:55+0000] "PUT /events HTTP/1.1" 500 4439
```

```
/home/morty/logs/2019/12/apache_2019-12-30.txt:77.101.138.151 - - [30/12/2019:21:39:57+0000] "PUT /lists HTTP/1.1" 500 2194
```

База данных

Задание 1

Число автомобилей:

5500

Запрос, которым тебе удалось решить задачу.

```
$ psql -U morty
```

```
$ \c chicago_taxi
```

```
$ SELECT COUNT(DISTINCT vehicle_id) FROM cabs;
```

Задание 2

Список компаний с числом автомобилей меньше 100.

company_name	cnt
Nova Taxi Affiliation Llc	97
Patriot Taxi Db	89
Blue Diamond	85
Checker Taxi Affiliation	81
Chicago Medallion Management	80
Chicago Independents	69
24 Seven Taxi	67
Checker Taxi	60
American United	55

Chicago Medallion Leasing INC	53
Top Cab Affiliation	49
KOAM Taxi Association	48
Chicago Taxicab	38
Norshore Cab	34
Gold Coast Taxi	20
Metro Group	20
Service Taxi Association	18
5 Star Taxi	14
American United Taxi Affiliation	8
Metro Jet Taxi A	8
Setare Inc	7
Leonard Cab Co	5
4615 - 83503 Tyrone Henderson	1
5062 - 34841 Sam Mestas	1
4623 - 27290 Jay Kim	1
5997 - 65283 AW Services Inc.	1
2092 - 61288 Sbeih company	1
1469 - 64126 Omar Jada	1
2733 - 74600 Benny Jona	1
2192 - 73487 Zeymane Corp	1
5006 - 39261 Salifu Bawa	1
3556 - 36214 RC Andrews Cab	1
3721 - Santamaria Express, Alvaro Santamaria	1
2809 - 95474 C & D Cab Co Inc.	1
2241 - 44667 - Felman Corp, Manuel Alonso	1
3620 - 52292 David K. Cab Corp.	1

2823 - 73307 Lee Express Inc		1
6057 - 24657 Richard Addo		1
6742 - 83735 Tasha ride inc		1
1085 - 72312 N and W Cab Co		1
3591 - 63480 Chuks Cab		1
0118 - 42111 Godfrey S.Awir		1
6574 - Babylon Express Inc.		1
3094 - 24059 G.L.B. Cab Co		1
5874 - 73628 Sergey Cab Corp.		1
6743 - 78771 Luhak Corp		1
5074 - 54002 Ahzmi Inc		1
:3623 - 72222 Arrington Enterprises		1
4053 - 40193 Adwar H. Nikola		1
Chicago Star Taxicab		1
3011 - 66308 JBL Cab Inc.		1

(51 rows)

Запрос, которым тебе удалось решить задачу.

```
$ SELECT company_name, COUNT(cab_id) AS cnt FROM cabs GROUP BY
company_name HAVING COUNT(cab_id) < 100 ORDER BY cnt DESC;
```

Задание 3

Таблица с данными за указанный период.

ts	weather_conditions
-----+-----	
2017-11-05 15:00:00	Good
2017-11-05 03:00:00	Good

2017-11-05 00:00:00 | Good
2017-11-05 05:00:00 | Bad
2017-11-05 10:00:00 | Good
2017-11-06 00:00:00 | Good
2017-11-05 14:00:00 | Bad
2017-11-05 07:00:00 | Good
2017-11-05 12:00:00 | Good
2017-11-05 23:00:00 | Good
2017-11-05 09:00:00 | Good
2017-11-05 18:00:00 | Bad
2017-11-05 08:00:00 | Good
2017-11-05 06:00:00 | Good
2017-11-05 20:00:00 | Bad
2017-11-05 17:00:00 | Good
2017-11-05 19:00:00 | Bad
2017-11-05 13:00:00 | Good
2017-11-05 22:00:00 | Good
2017-11-05 16:00:00 | Bad
2017-11-05 04:00:00 | Bad
2017-11-05 11:00:00 | Good
2017-11-05 01:00:00 | Bad
2017-11-05 21:00:00 | Good
2017-11-05 02:00:00 | Good

(25 rows)

(END)

Запрос, которым удалось решить задачу.

```
SELECT ts, CASE WHEN weather_records.description LIKE '%rain%' OR description LIKE '%storm%' THEN 'Bad' ELSE 'Good' END AS weather_conditions FROM weather_records WHERE ts BETWEEN '2017-11-05' AND '2017-11-06' GROUP BY ts, weather_conditions;
```

Задание 4

Таблица с данными за указанный период.

company_name	trips_amount
Flash Cab	19558
Taxi Affiliation Services	11422
Medallion Leasin	10367
Yellow Cab	9888
Taxi Affiliation Service Yellow	9299
Chicago Carriage Cab Corp	9181
City Service	8448
Sun Taxi	7701
Star North Management LLC	7455
Blue Ribbon Taxi Association Inc.	5953
Choice Taxi Association	5015
Globe Taxi	4383
Dispatch Taxi Affiliation	3355
Nova Taxi Affiliation Llc	3175
Patriot Taxi Dbа Peace Taxi Associat	2235
Checker Taxi Affiliation	2216
Blue Diamond	2070
Chicago Medallion Management	1955
24 Seven Taxi	1775

Chicago Medallion Leasing INC		1607
Checker Taxi		1486
American United		1404
Chicago Independents		1296
KOAM Taxi Association		1259
Chicago Taxicab		1014
Top Cab Affiliation		978
Gold Coast Taxi		428
Service Taxi Association		402
5 Star Taxi		310
303 Taxi		250
Setare Inc		230
American United Taxi Affiliation		210
Leonard Cab Co		147
Metro Jet Taxi A		146
Norshore Cab		127
6742 - 83735 Tasha ride inc		39
3591 - 63480 Chuks Cab		37
1469 - 64126 Omar Jada		36
6743 - 78771 Luhak Corp		33
0118 - 42111 Godfrey S.Awir		33
6574 - Babylon Express Inc.		31
Chicago Star Taxicab		29
1085 - 72312 N and W Cab Co		29
2809 - 95474 C & D Cab Co Inc.		29
2092 - 61288 Sbeih company		27
3011 - 66308 JBL Cab Inc.		25

3620 - 52292 David K. Cab Corp.		21
4615 - 83503 Tyrone Henderson		21
3623 - 72222 Arrington Enterprises		20
5074 - 54002 Ahzmi Inc		16
2823 - 73307 Lee Express Inc		15
4623 - 27290 Jay Kim		15
3721 - Santamaria Express, Alvaro Santamaria		14
5006 - 39261 Salifu Bawa		14
2192 - 73487 Zeymane Corp		14
6057 - 24657 Richard Addo		13
5997 - 65283 AW Services Inc.		12
Metro Group		11
5062 - 34841 Sam Mestas		8
4053 - 40193 Adwar H. Nikola		7
2733 - 74600 Benny Jona		7
5874 - 73628 Sergey Cab Corp.		5
2241 - 44667 - Felman Corp, Manuel Alonso		3
3556 - 36214 RC Andrews Cab		2

(64 rows)

(END)

Запрос, которым удалось решить задачу.

```
SELECT company_name, COUNT(trips.trip_id) as trips_amount FROM trips INNER JOIN
cabs ON cabs.cab_id = trips.cab_id WHERE start_ts BETWEEN '2017-11-15 0:00' AND
'2017-11-16 23:00' GROUP BY company_name ORDER BY trips_amount DESC;
```

