

The result of 10 POST requests. From left to right: logging service 1, logging service 2, logging service 2, messaging service, facade service

TERMINAL	PROBLEMS	OUTPUT	DEBUG CONSOLE	SQL CONSOLE	
Da\UCU\Year3 /Semester2/A rchitecture/ lab3python\port ogger.py 808 2		OST / HTTP/1. 1" 200 - msg = msg3 UUID = fdf39 143-3087-595c -8efc-3f00cd2 fbda 127.0.0.1 - - [01/May/2022 20:12:06] "P OST / HTTP/1. 1" 200 - msg = msg5 UUID = d4fb4 6c8-8a28-57dd -bee6-2c04101 1e0a 127.0.0.1 - - [01/May/2022 20:12:15] "P OST / HTTP/1. 1" 200 - msg = msg6 UUID = 5c940d55-7bca-5cd f-879c-72b32945d25 127.0.0.1 - - [01/M ay/2022 20:12:19] " POST / HTTP/1.1" 20 0 - msg = msg7 UUID = 91322259-b5d9-5a2 5-a003-0d6a9b259ba 127.0.0.1 - - [01/M ay/2022 20:12:23] " POST / HTTP/1.1" 20 0 - []	> & "D:\Da\Soure\1 ft\Python 3.7y 808 .4\python.exeort " d:/Da/UCU/Y ear3/Semester 2/Architectur e/lab3python/ logger.py 808 4 Launched on p ort 8084 msg = msg1 UUID = 487e0 156-a04c-5aeb -b42c-52c752b c2dd 127.0.0.1 - - [01/May/2022 20:11:58] "P OST / HTTP/1. 1" 200 - msg = msg4 UUID = ea443182-4ac5-585c-bc27-6ddf87b692c 127.0.0.1 - - [01/M ay/2022 20:12:11] " POST / HTTP/1.1" 20 0 - msg = msg9 UUID = 6a86c666-db9b-5b6e-94b2-990a95a783a 127.0.0.1 - - [01/M ay/2022 20:12:31] " POST / HTTP/1.1" 20 0 - []	PS D:\Da\UCU\Da/S Year3\Semesteython P2\Architectuar3/S re\lab3pythonure/1 > & "D:\Da\So.py ft\Python 3.7 .4\python.exe " d:/Da/UCU/Y ear3/Semester 2/Architectur e/lab3python/ messages.py 127.0.0.1 - - [01/May/2022 20:00:02] "G ET / HTTP/1.1 " 200 - 127.0.0.1 - - [01/May/2022 20:00:07] "G ET / HTTP/1.1 " 200 - 127.0.0.1 - - [01/May/ 2022 20:02:24] "GET / HTTP/1.1" 200 - 127.0.0.1 - - [01/May/ 2022 20:04:10] "GET / HTTP/1.1" 200 - 127.0.0.1 - - [01/May/ 2022 20:07:24] "GET / HTTP/1.1" 200 - 127.0.0.1 - - [01/May/ 2022 20:07:28] "GET / HTTP/1.1" 200 - []	File "D:\Da\Soft\Python 3.7.4\lib\http\server.py", line 414, in handle_one_request method() File "d:/Da/UCU/Year3/Semester2/Architecture/lab3python/facade.py", li ne 38, in do_POST post_msg = post_data.decode().split("msg=")[1] IndexError: list index out of range ----- received request msg=msg1 msg = msg1 UUID 487e0156-a04c-5aeb-b42c-52c752bc2dd7 127.0.0.1 - - [01/May/2022 20:11:56] "POST / HTTP/1.1" 200 - POST request b'UUID=487e0156-a04c-5aeb-b42c-52c752bc2dd7msg=msg1' received request msg=msg2 msg = msg2 UUID 269ffb39-eee6-584a-b6c3-7e8d363056e5 127.0.0.1 - - [01/May/2022 20:12:00] "POST / HTTP/1.1" 200 - POST request b'UUID=269ffb39-eee6-584a-b6c3-7e8d363056e5msg=msg2' received request msg=msg3 msg = msg3 UUID fdf39143-3087-595c-8efc-3f00cd2fbda9 127.0.0.1 - - [01/May/2022 20:12:04] "POST / HTTP/1.1" 200 - POST request b'UUID=fdf39143-3087-595c-8efc-3f00cd2fbda9msg=msg3' received request msg=msg4 msg = msg4 UUID ea443182-4ac5-585c-bc27-6ddf87b692c7 127.0.0.1 - - [01/May/2022 20:12:08] "POST / HTTP/1.1" 200 - POST request b'UUID=ea443182-4ac5-585c-bc27-6ddf87b692c7msg=msg4' received request msg=msg5 msg = msg5 UUID d4fb46c8-8a28-57dd-bee6-2c041011e0a5 127.0.0.1 - - [01/May/2022 20:12:13] "POST / HTTP/1.1" 200 - POST request b'UUID=d4fb46c8-8a28-57dd-bee6-2c041011e0a5msg=msg5' msg = msg8 UUID d282689d-b8eb-5fce-9200-713be0936e32 127.0.0.1 - - [01/May/2022 20:12:25] "POST / HTTP/1.1" 200 - POST request b'UUID=d282689d-b8eb-5fce-9200-713be0936e32msg=msg8' received request msg=msg9 msg = msg9 UUID 6a86c666-db9b-5b6e-94b2-990a95a783a4 127.0.0.1 - - [01/May/2022 20:12:29] "POST / HTTP/1.1" 200 - POST request b'UUID=6a86c666-db9b-5b6e-94b2-990a95a783a4msg=msg9' received request msg=msg10 msg = msg10 UUID 02f2bfad-3e03-5f09-87e3-1c06de44a9c1 127.0.0.1 - - [01/May/2022 20:12:33] "POST / HTTP/1.1" 200 - POST request b'UUID=02f2bfad-3e03-5f09-87e3-1c06de44a9c1msg=msg10' []

3 Logging services in Hazelcast management center:

Map Statistics (In-Memory Format: BINARY)												Now		Now	
Member	Entries	Gets	Puts	Removals	Sets	Entry Memory	Backups	Backup Memory	Events	Hits	Locks	Dirty Entries			
192.168.239.1:57...	2	0	2	0	0	326.00 B	4	652.00 B	0	0	0	0			
192.168.239.1:57...	5	0	5	0	0	815.00 B	4	653.00 B	0	0	0	0			
192.168.239.1:57...	3	0	3	0	0	490.00 B	2	326.00 B	0	0	0	0			
TOTAL	10	0	10	0	0	1.59 kB	10	1.59 kB	0	0	0	0			

Postrequest.py script output:

```
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>python postrequest.py
200
POST request b'msg=msg1'
200
POST request b'msg=msg2'
200
POST request b'msg=msg3'
200
POST request b'msg=msg4'
200
POST request b'msg=msg5'
200
POST request b'msg=msg6'
200
POST request b'msg=msg7'
200
POST request b'msg=msg8'
200
POST request b'msg=msg9'
200
POST request b'msg=msg10'
```

Proof of random distribution:

```

msg = msg1 UUID = 487e0156-a04c-5aeb-b42c-52c752bc2dd
127.0.0.1 - - [01/May/2022 20:53:28] "POST / HTTP/1.1" 200 -
msg = msg2 UUID = 269ffb39-eee6-584a-b6c3-7e8d363056e
127.0.0.1 - - [01/May/2022 20:53:32] "POST / HTTP/1.1" 200 -
msg = msg4 UUID = ea443182-4ac5-585c-bc27-6ddf87b692c
127.0.0.1 - - [01/May/2022 20:53:40] "POST / HTTP/1.1" 200 -
msg = msg5 UUID = d4fb46c8-8a28-57dd-bee6-2c041011e0a
127.0.0.1 - - [01/May/2022 20:53:44] "POST / HTTP/1.1" 200 -
msg = msg8 UUID = d282689d-b8eb-5fce-9200-713be0936e3
127.0.0.1 - - [01/May/2022 20:53:57] "POST / HTTP/1.1" 200 -
msg = msg10 UUID = 02f2bfad-3e03-5f09-87e3-1c06de44a9c
127.0.0.1 - - [01/May/2022 20:54:05] "POST / HTTP/1.1" 200 -
[]

0a95a783a', 'msg9') , ('d282689d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg87-595c-8efc-3f00cd2fbda', 'msg3')])
PS D:\Da\UCU\Year3\Semester2\Architecture\lab3python>
ure\lab3python>
ure\lab3python> & "D:/Da/Soft/Python 3.7.4/python.exe" d:/Da/UCU/Year3/Semester2/Architecture/lab3python/logger.py 8083
Launched on port 8083

msg = msg3 UUID = fdf39143-3087-595c-8efc-3f00cd2fbda
127.0.0.1 - - [01/May/2022 20:53:36] "POST / HTTP/1.1" 200 -
msg = msg9 UUID = 6a86c666-db9b-5b6e-94b2-990a95a783a
127.0.0.1 - - [01/May/2022 20:54:01] "POST / HTTP/1.1" 200 -
[]

sg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a25ure\lab3python> & "D:/Da/Soft/Python 3.7.4/python.exe" d:/Da/UCU/Year3/Semester2/Architecture/lab3python/logger.py 8084
ure\lab3python> & "D:/Da/Soft/Python 3.7.4/python.exe" d:/Da/UCU/Year3/Semester2/Architecture/lab3python/logger.py 8084
Launched on port 8084

msg = msg6 UUID = 5c940d55-7bca-5cdf-879c-72b32945d25
127.0.0.1 - - [01/May/2022 20:53:49] "POST / HTTP/1.1" 200 -
msg = msg7 UUID = 91322259-b5d9-5a25-a003-0d6a9b259ba
127.0.0.1 - - [01/May/2022 20:53:53] "POST / HTTP/1.1" 200 -
[]

```

Getrequest.py script output with different amount of logging services (3, 2 and 1):

```
C:\Windows\System32\cmd.exe
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>python getrequest.py
200
["(['ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e', 'msg2'),
 ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72b32945d25', 'msg6'),
 ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a25-a003-0d6a9b259ba', 'msg7'),
 ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d282689d-b8eb-5fce-9200-713be0936e3', 'msg8'), (
 '02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]",
 'Messages Service not Implemented']

d:\Da\UCU\Year3\Semester2\Architecture\lab3python>python getrequest.py
200
["(['ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e', 'msg2'),
 ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72b32945d25', 'msg6'),
 ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a25-a003-0d6a9b259ba', 'msg7'),
 ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d282689d-b8eb-5fce-9200-713be0936e3', 'msg8'), (
 '02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]",
 'Messages Service not Implemented']

d:\Da\UCU\Year3\Semester2\Architecture\lab3python>python getrequest.py
200
["(['ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e', 'msg2'),
 ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72b32945d25', 'msg6'),
 ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a25-a003-0d6a9b259ba', 'msg7'),
 ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d282689d-b8eb-5fce-9200-713be0936e3', 'msg8'), (
 '02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]",
 'Messages Service not Implemented']

d:\Da\UCU\Year3\Semester2\Architecture\lab3python>
```

Facade output while using getrequest.py script:

```
D:\Da\UCU\Year3\Semester2\Architecture\lab3python>"D:/Da/Soft/Python 3.7.4/python.exe" d
:/Da/UCU/Year3/Semester2/Architecture/lab3python/facade.py 8086
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:03:53 GMT', 'Conten
t-type': 'text/html'}
[('ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e'
, 'msg2'), ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72
b32945d25', 'msg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a
25-a003-0d6a9b259ba', 'msg7'), ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d28268
9d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'
), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]]
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:03:55 GMT', 'Conten
t-type': 'text/html'}
Messages Service not Implemented
127.0.0.1 - - [01/May/2022 21:03:55] "GET /?msg=HELLO HTTP/1.1" 200 -
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:01 GMT', 'Conten
t-type': 'text/html'}
[('ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e'
, 'msg2'), ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72
b32945d25', 'msg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a
25-a003-0d6a9b259ba', 'msg7'), ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d28268
9d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'
), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]]
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:03 GMT', 'Conten
t-type': 'text/html'}
Messages Service not Implemented
127.0.0.1 - - [01/May/2022 21:04:03] "GET /?msg=HELLO HTTP/1.1" 200 -
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:08 GMT', 'Conten
t-type': 'text/html'}
[('ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e'
, 'msg2'), ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72
b32945d25', 'msg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a
25-a003-0d6a9b259ba', 'msg7'), ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d28268
9d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'
), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]]
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:10 GMT', 'Conten
t-type': 'text/html'}
Messages Service not Implemented
127.0.0.1 - - [01/May/2022 21:04:10] "GET /?msg=HELLO HTTP/1.1" 200 -
[]
```