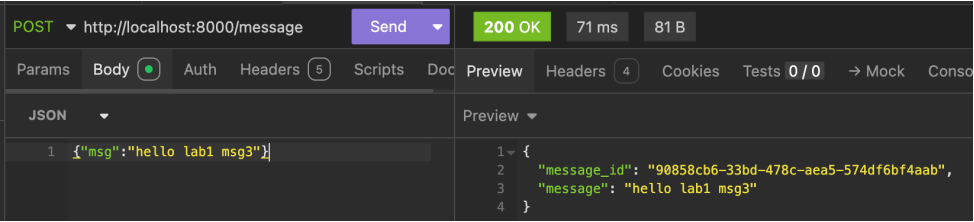
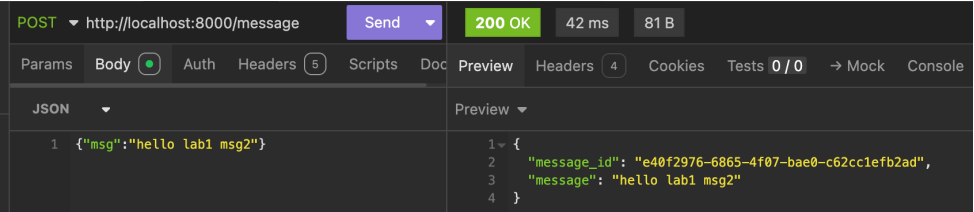
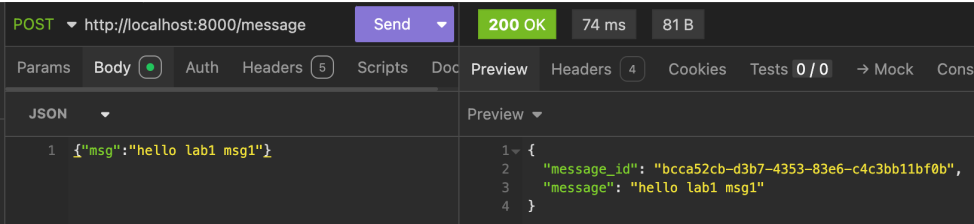
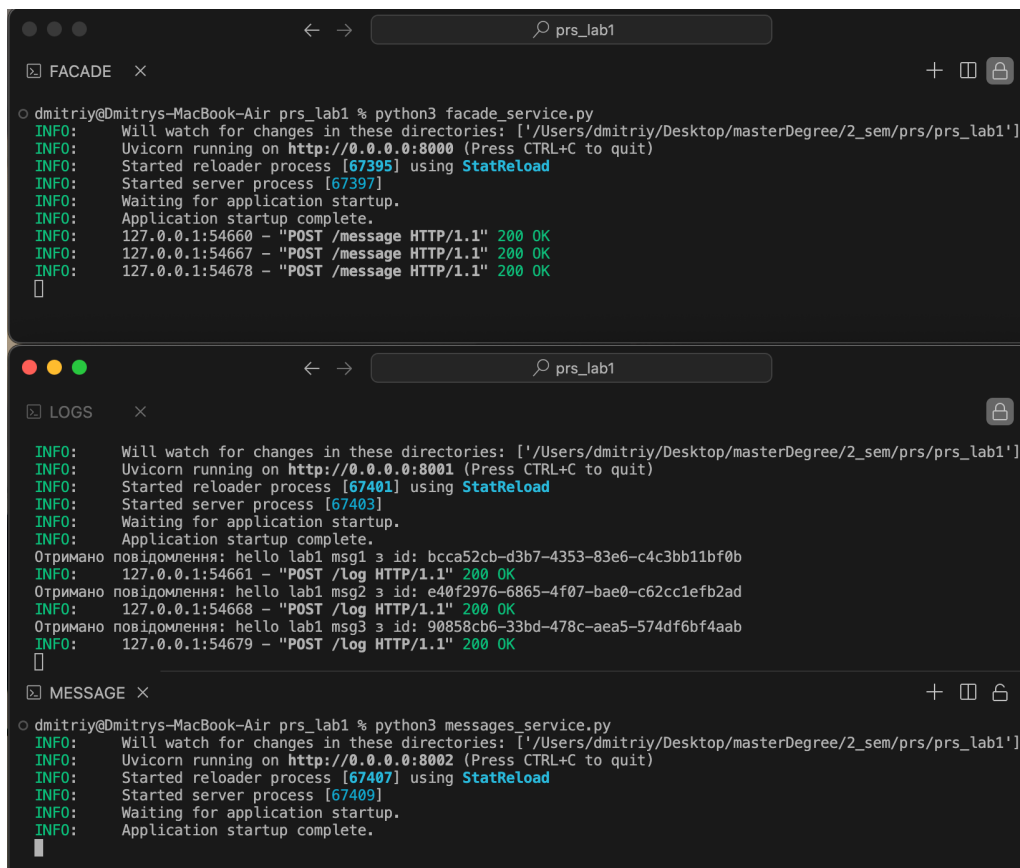


Рябко Дмитро ФБ-42мп

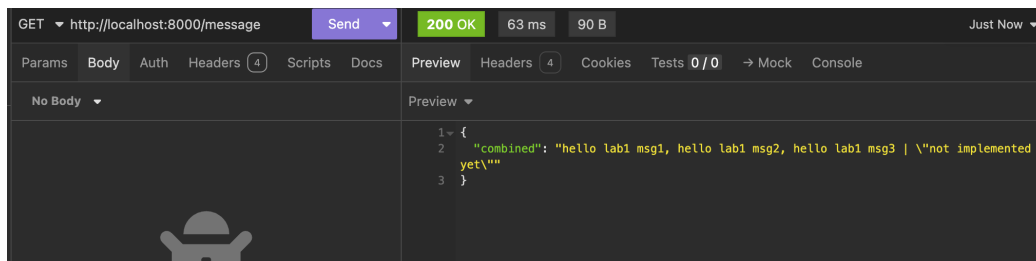


POST:





GET:



```

FACADE x
+ [ ] [ ] ...

o dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 facade_service.py
INFO: Will watch for changes in these directories: ['/Users/dmitriy/Desktop/masterDegree/2_sem/prs/prs_lab1']
INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
INFO: Started reloader process [67395] using StatReload
INFO: Started server process [67397]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: 127.0.0.1:54660 - "POST /message HTTP/1.1" 200 OK
INFO: 127.0.0.1:54667 - "POST /message HTTP/1.1" 200 OK
INFO: 127.0.0.1:54678 - "POST /message HTTP/1.1" 200 OK
INFO: 127.0.0.1:54710 - "GET /message HTTP/1.1" 200 OK
[ ]

pr_s_lab1

LOGS x
+ [ ] [ ] ...

INFO: Uvicorn running on http://0.0.0.0:8001 (Press CTRL+C to quit)
INFO: Started reloader process [67401] using StatReload
INFO: Started server process [67403]
INFO: Waiting for application startup.
INFO: Application startup complete.
Отримано повідомлення: hello lab1 msg1 з id: bcca52cb-d3b7-4353-83e6-c4c3bb11bf0b
INFO: 127.0.0.1:54661 - "POST /log HTTP/1.1" 200 OK
Отримано повідомлення: hello lab1 msg2 з id: e40f2976-6865-4f07-bae0-c62cc1efb2ad
INFO: 127.0.0.1:54668 - "POST /log HTTP/1.1" 200 OK
Отримано повідомлення: hello lab1 msg3 з id: 90858cb6-33bd-478c-aea5-574df6bf4aab
INFO: 127.0.0.1:54679 - "POST /log HTTP/1.1" 200 OK
INFO: 127.0.0.1:54711 - "GET /logs HTTP/1.1" 200 OK
[ ]

MESSAGE x
+ [ ] [ ] ...

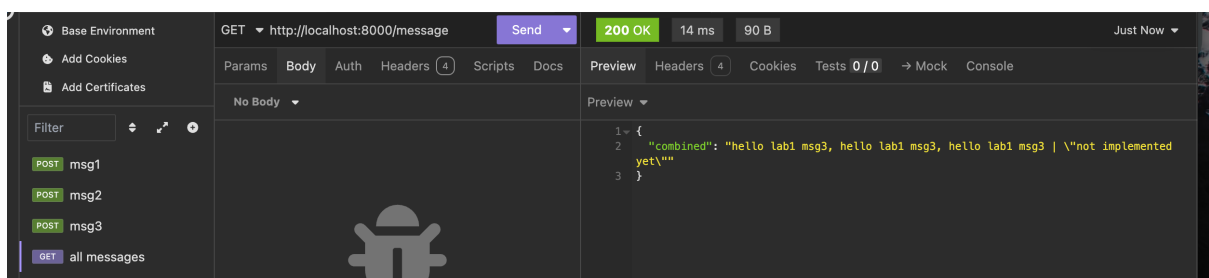
o dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 messages_service.py
INFO: Will watch for changes in these directories: ['/Users/dmitriy/Desktop/masterDegree/2_sem/prs/prs_lab1']
INFO: Uvicorn running on http://0.0.0.0:8002 (Press CTRL+C to quit)
INFO: Started reloader process [67407] using StatReload
INFO: Started server process [67409]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: 127.0.0.1:54712 - "GET /static HTTP/1.1" 200 OK
[ ]

```

```
○ dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 facade_service.py
INFO: Will watch for changes in these directories: ['/Users/dmitriy/Desktop/masterDegree/2_sem
INFO: Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
INFO: Started reloader process [66952] using StatReload
INFO: Started server process [66954]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: 127.0.0.1:54406 - "POST /message HTTP/1.1" 200 OK
INFO: 127.0.0.1:54406 - "POST /message HTTP/1.1" 200 OK
INFO: 127.0.0.1:54406 - "POST /message HTTP/1.1" 200 OK
█

○ dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 logging_service.py
INFO: Will watch for changes in these directories: ['/Users/dmitriy/Desktop/masterDegree/2_sem
INFO: Uvicorn running on http://0.0.0.0:8001 (Press CTRL+C to quit)
INFO: Started reloader process [66959] using StatReload
INFO: Started server process [66961]
INFO: Waiting for application startup.
INFO: Application startup complete.
Отримано повідомлення: hello lab1 msg1 з id: 5f08d673-d442-4231-ac27-1cf9161b09a1
INFO: 127.0.0.1:54407 - "POST /log HTTP/1.1" 200 OK
Отримано повідомлення: hello lab1 msg2 з id: 7c70f6de-a58e-44e4-bab0-8aa2ea1fa36d
INFO: 127.0.0.1:54408 - "POST /log HTTP/1.1" 200 OK
Отримано повідомлення: hello lab1 msg3 з id: 11f2ff4e-ebdf-443e-b1bb-9490bdec2936
INFO: 127.0.0.1:54409 - "POST /log HTTP/1.1" 200 OK
█

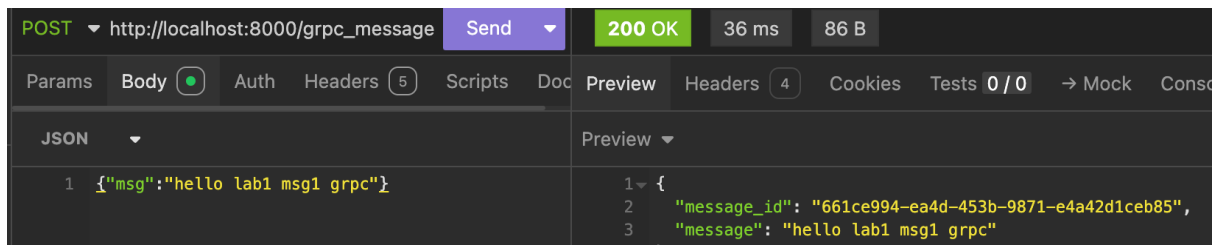
○ dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 messages_service.py
INFO: Will watch for changes in these directories: ['/Users/dmitriy/Desktop/masterDegree/2_sem
INFO: Uvicorn running on http://0.0.0.0:8002 (Press CTRL+C to quit)
INFO: Started reloader process [66967] using StatReload
INFO: Started server process [66969]
INFO: Waiting for application startup.
INFO: Application startup complete.
█
```



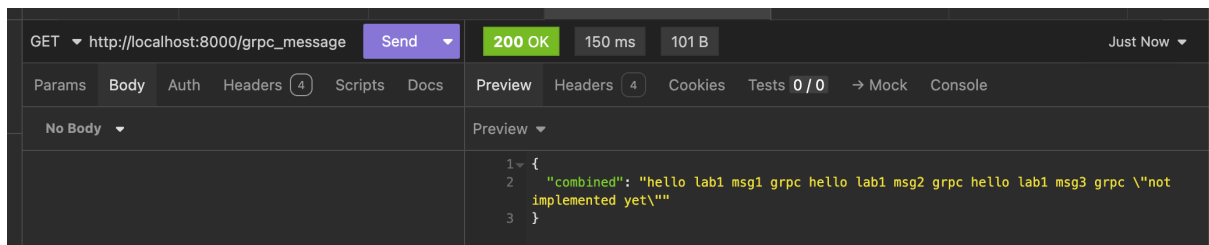
gRPC:

```
● dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 -m grpc_tools.protoc -I. --python_out=. --grpc_python_out=. logging_service.proto
○ dmitriy@Dmitrys-MacBook-Air prs_lab1 %
```

```
● dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 logging_service_pb2.py
○ dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 logging_grpc_service.py
gRPC logging-service запущено на порту 50051
```

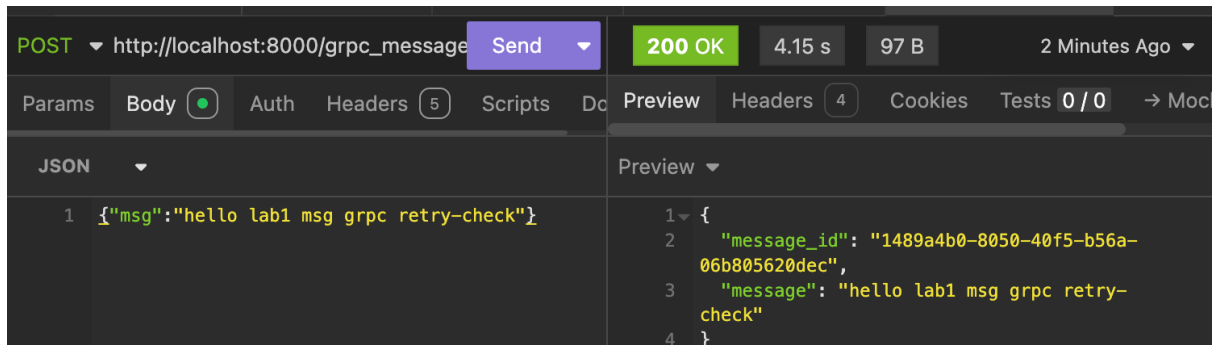


```
○ dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 logging_grpc_service.py
gRPC logging-service запущено на порту 50051
Отримано повідомлення: hello lab1 msg1 grpc з id: e74e28a4-fcca-4eed-abb2-b1290f9322
1d
Отримано повідомлення: hello lab1 msg2 grpc з id: 85d06310-f6bf-4a5e-aef9-6a8a7ac92e
ba
Отримано повідомлення: hello lab1 msg3 grpc з id: eaceab10-072f-4b7f-8cc4-41dec0fedc
e0
```



Retry:

Вимкнемо logging gRPC сервіс та вкл через 3 секунди після відправки запиту:



POST http://localhost:8000/grpc_message Send 200 OK 4.15 s 97 B 2 Minutes Ago

Params Body Auth Headers (5) Scripts Do Preview Headers (4) Cookies Tests 0/0 → Moc

JSON

```
1 {"msg":"hello lab1 msg grpc retry-check"}
```

Preview

```
1 {
2   "message_id": "1489a4b0-8050-40f5-b56a-06b805620dec",
3   "message": "hello lab1 msg grpc retry-check"
4 }
```

```
o dmitriy@Dmitrys-MacBook-Air prs_lab1 % python3 logging_grpc_service.py
gRPC logging-service запущено на порту 50051
Отримано повідомлення: hello lab1 msg grpc retry-check з id: 1489a4b0-8050-40f5-b56a-06b805620dec
```

```
INFO: Application shutdown complete.
INFO: Finished server process [70762]
INFO: Started server process [70772]
INFO: Waiting for application startup.
INFO: Application startup complete.
gRPC POST: Спроба 1 не вдалася: <InactiveRpcError of RPC that terminated with:
  status = StatusCode.UNAVAILABLE
  details = "failed to connect to all addresses; last error: UNKNOWN: ipv4:127.0.0.1:50051: Failed to connect
to remote host: connect: Connection refused (61)"
  debug_error_string = "UNKNOWN:Error received from peer {grpc_message:"failed to connect to all addresses;
last error: UNKNOWN: ipv4:127.0.0.1:50051: Failed to connect to remote host: connect: Connection refused (61)", gpc_status:14, created_time:"2025-03-23T16:35:47.959778+02:00"}">
gRPC POST: Спроба 2 не вдалася: <InactiveRpcError of RPC that terminated with:
  status = StatusCode.UNAVAILABLE
  details = "failed to connect to all addresses; last error: UNKNOWN: ipv4:127.0.0.1:50051: Failed to connect
to remote host: connect: Connection refused (61)"
  debug_error_string = "UNKNOWN:Error received from peer {created_time:"2025-03-23T16:35:49.973595+02:00", g
rpc_status:14, grpc_message:"failed to connect to all addresses; last error: UNKNOWN: ipv4:127.0.0.1:50051: Failed
to connect to remote host: connect: Connection refused (61)}">
gRPC POST: Відповідь від logging-service: Повідомлення успішно збережено
INFO: 127.0.0.1:56629 - "POST /grpc_message HTTP/1.1" 200 OK
```

exactly once delivery:

```
def LogMessage(self, request, context):
    if request.id in messages:
        detail = "Повідомлення з таким ID вже існує"
    else:
        messages[request.id] = request.msg
        detail = "Повідомлення успішно збережено"
        print(f"Отримано повідомлення: {request.msg} з id: {request.id}")
    return logging_service_pb2.LogResponse(detail=detail)
```

Для тесту замінімо `uuid.uuid4()` на щось статичне та приберемо `break` в циклі

```
msg = message.msg
message_id = str(uuid.uuid4())
request_proto = logging_service_pb2.LogRequest(msg=msg, id=message_id)

msg = message.msg
message_id = str(999)
request_proto = logging_service_pb2.LogRequest(msg=msg, id=message_id)
```

```
retries = 5
for attempt in range(retries):
    try:
        channel = grpc.insecure_channel(GRPC_LOGGING_SERVICE_ADDRESS)
        stub = logging_service_pb2_grpc.LoggingServiceStub(channel)
        response = stub.LogMessage(request_proto, timeout=5)
        print(f"gRPC POST: Відповідь від logging-service: {response.detail}")
        channel.close()
    except:
        pass
```

JSON	Preview
1 { "msg": "check once delivery" }	1 { 2 "message_id": "999", 3 "message": "check once delivery" 4 }

Результат

```
INFO: Finished server process [71320]
INFO: Started server process [71328]
INFO: Waiting for application startup.
INFO: Application startup complete.
gRPC POST: Відповідь від logging-service: Повідомлення успішно збережено
gRPC POST: Відповідь від logging-service: Повідомлення з таким ID вже існує
gRPC POST: Відповідь від logging-service: Повідомлення з таким ID вже існує
gRPC POST: Відповідь від logging-service: Повідомлення з таким ID вже існує
gRPC POST: Відповідь від logging-service: Повідомлення з таким ID вже існує
INFO: 127.0.0.1:56942 - "POST /grpc_message HTTP/1.1" 200 OK
WARNING: StatReload detected changes in 'facade_service.py'. Reloading...
INFO: Shutting down
INFO: Waiting for application shutdown.
INFO: Application shutdown complete.
```