```
Símbolo del sistema
 Microsoft Windows [Versión 10.0.22631.3155]
(c) Microsoft Corporation. Todos los derechos reservados.
  C:\Users\halex>$ python -m pip install --upgrade pip
 "$" no se reconoce como un comando interno o externo,
programa o archivo por lotes ejecutable.
  C:\Users\halex>python -m pip install --upgrade pip
Requirement already satisfied: pip in c:\users\halex\appdata\local\programs\python\python311\lib\site-packages (23.2.1)
  Collecting pip
 Obtaining dependency information for pip from https://files.pythonhosted.org/packages/8a/6a/19e9fe04fca059ccf770861c7d 5721ab4c2aebc539889e97c7977528a53b/pip-24.0-py3-none-any.whl.metadata Downloading pip-24.0-py3-none-any.whl.metadata (3.6 kB) Downloading pip-24.0-py3-none-any.whl (2.1 MB)
                                                                              2.1/2.1 MB 4.3 MB/s eta 0:00:00
  Installing collected packages: pip
Attempting uninstall: pip
Found existing installation: pip 23.2.1
 Uninstalling instattation papers
Uninstalling pip-23.2.1:
Successfully uninstalled pip-23.2.1
Successfully installed pip-24.0
  C:\Users\halex>python -m pip install grpcio
 Collecting grpcio
Downloading grpcio-1.62.0-cp311-cp311-win_amd64.whl.metadata (4.2 kB)
 Downloading grpcio-1.62.0-cp311-cp311-win_amd64.whl (3.8 MB)

Downloading grpcio-1.62.0-cp311-cp311-win_amd64.whl (3.8 MB)

3.8/3.8 MB 5.4 MB/s eta 0:00:00
  Installing collected packages: grpcio
Successfully installed grpcio-1.62.0
Downloading grpcio-1.62.0-cp311-cp311-win_amd64.whl (3.8 MB)

3.8/3.8 MB 5.4 MB/s eta 0:00:00
Installing collected packages: grpcio
Successfully installed grpcio-1.62.0
C:\Users\halex>python -m pip install grpcio-tools
Collecting grpcio-tools
Downloading grpcio_tools-1.62.0-cp311-cp311-win_amd64.whl.metadata (6.4 kB)
Requirement already satisfied: protobuf<5.0dev,>=4.21.6 in c:\users\halex\appdata\local\programs\python\python311\lib\site-packages (from grpcio-tools) (4.21.12)
Requirement already satisfied: grpcio>=1.62.0 in c:\users\halex\appdata\local\programs\python\python311\lib\site-package s (from grpcio-tools) (1.62.0)
Requirement already satisfied: setuntools in c:\users\halex\appdata\local\programs\python\python311\lib\site-package s (from grpcio-tools) (1.62.0)
 Requirement already satisfied: setuptools in c:\users\halex\appdata\local\programs\python\python311\lib\site-packages (f rom grpcio-tools) (65.5.0)
 Downloading grpcio_tools=1.62.0-cp311-cp311-win_amd64.whl (1.1 MB)
                                                                                                              eta 0:00:00
Installing collected packages: grpcio-tools
Successfully installed grpcio-tools-1.62.0
 C:\Users\halex>git clone -b v1.62.0 --depth 1 --shallow-submodules https://github.com/grpc/grpc
 "git" no se reconoce como un comando interno o externo,
 programa o archivo por lotes ejecutable.
 C:\Users\halex>$ qit clone -b v1.62.0 --depth 1 --shallow-submodules https://qithub.com/grpc/grpc
 "$" no se reconoce como un comando interno o externo,
 programa o archivo por lotes ejecutable.
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```
helloworld.proto
                  greeter_server.py
                                        greeter_client.py X
amples > python > helloworld > 🍖 greeter_client.py
     """The Python implementation of the GRPC helloworld.Greeter client."""
     from __future__ import print_function
     import logging
     import grpc
     import helloworld_pb2
     import helloworld_pb2_grpc
    def run():
         with grpc.insecure_channel('localhost:50051') as channel:
             stub = helloworld_pb2_grpc.GreeterStub(channel)
             response = stub.SayHello(helloworld_pb2.HelloRequest(name='you'))
             print("Greeter client received: " + response.message)
             response = stub.SayHelloAgain(helloworld_pb2.HelloRequest(name='you'))
             print("Greeter client received: " + response.message)
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     if __name__ == "__main__":
         logging.basicConfig()
         run()
```

```
examples > python > helloworld > 💠 greeter_server.py > 😭 Greeter > 😚 SayHelloAgain

14 """The Python implementation of the GRPC helloworld.Greeter server."""
oyth...
              import logging
              import helloworld_pb2
              import helloworld_pb2_grpc
              class Greeter(helloworld_pb2_grpc.GreeterServicer):
                   def SayHello(self, request, context):
                     return helloworld_pb2.HelloReply(message=f"Hello, {request.name}!")
ntio..
                   def SayHelloAgain(self, request, context):
         30
                  return helloworld_pb2.HelloReply(message=f"Hello again, {request.name}!")
race...
              def serve():
eflec...
                   port = "50051"
                   server = grpc.server(futures.ThreadPoolExecutor(max_workers=10))
                   helloworld_pb2_grpc.add_GreeterServicer_to_server(Greeter(), server)
                   server.add_insecure_port("[::]:" + port)
                   server.start()
print("Server started, listening on " + port)
on.py
                   server.wait_for_termination()
              if __name__ == "__main__":
    logging.basicConfig()
                   serve()
```