

## Questions

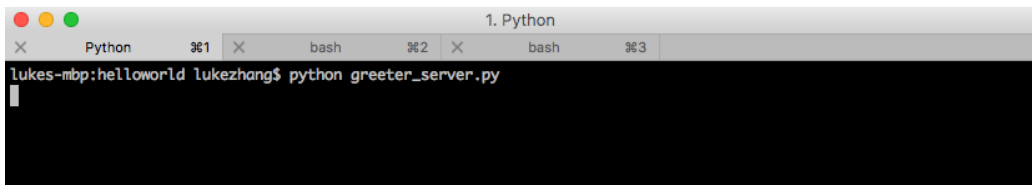
- What is Semantic interoperability?
- How to implement and use Semantic interoperability?
- Why to use Semantic interoperability? What are the advantages?

## Answers

- Semantic interoperability is the ability of software to share data between different system, clients and servers.
- In this lab, I used Google RPC to set up one Python server to response to both Python clients and Node Js client. Both clients can get the current time information from the server even though the programming languages can be different than the server language.
- Semantic interoperability is awesome to implement since the server and client can share information/data even with different programming language. The availability can be extended widely. And it's easy to add more clients.

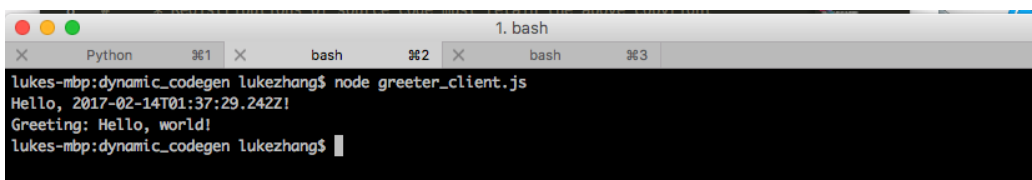
## Screen Shot

I added extra PrintCurrentTimePython function in both python/node JS client side and server side so by calling the function, it will return the current time.



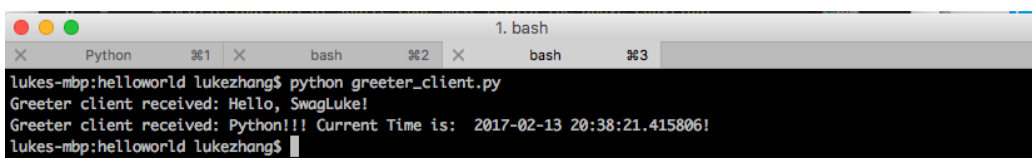
```
lukes-mbp:helloworld lukezhang$ python greeter_server.py
```

Figure 1: Python Server



```
lukes-mbp:dynamic_codegen lukezhang$ node greeter_client.js
Hello, 2017-02-14T01:37:29.242Z!
Greeting: Hello, world!
lukes-mbp:dynamic_codegen lukezhang$
```

Figure 2: Node JS Client



```
lukes-mbp:helloworld lukezhang$ python greeter_client.py
Greeter client received: Hello, SwagLuke!
Greeter client received: Python!!! Current Time is: 2017-02-13 20:38:21.415806!
lukes-mbp:helloworld lukezhang$
```

Figure 3: Python Client