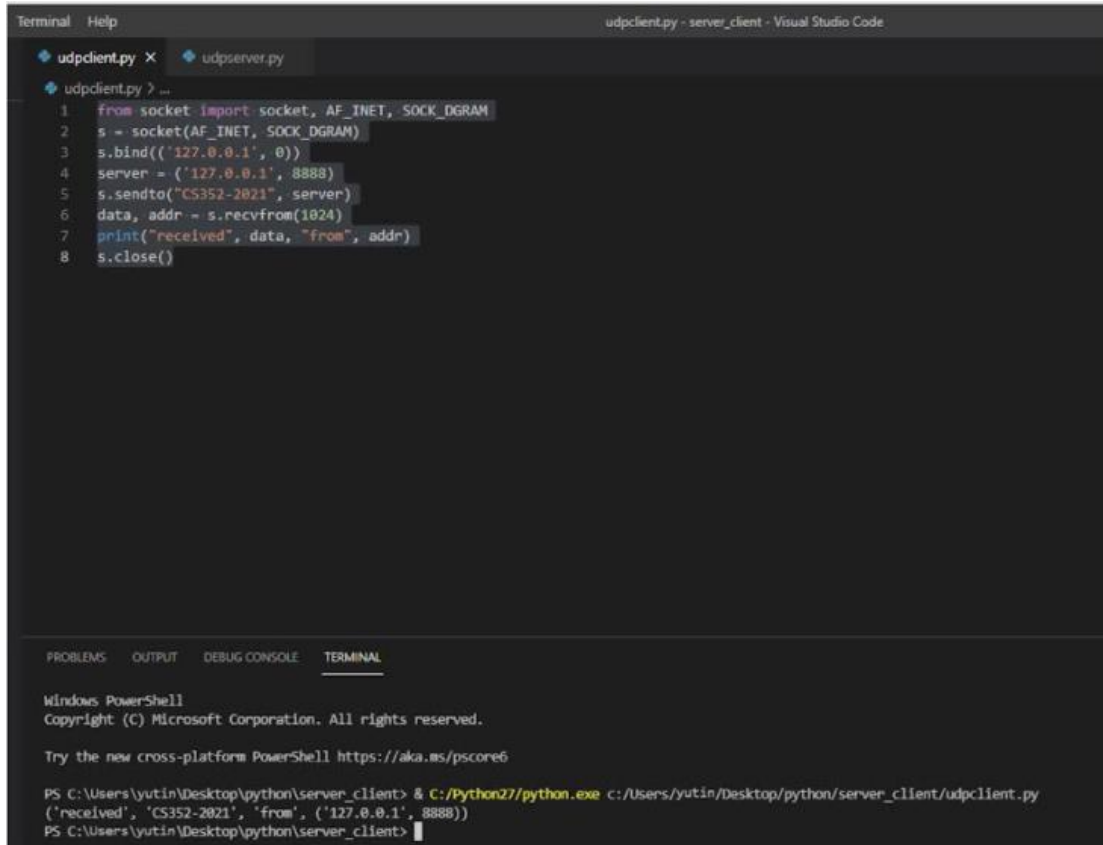


CS352 – Summer 2021

Project 3

Yuting Chen

1. Run the UDP server-client code with python 2.



The image shows a Visual Studio Code editor window with two tabs: `udpclient.py` and `udpserver.py`. The `udpclient.py` tab is active, displaying the following Python code:

```
1 from socket import socket, AF_INET, SOCK_DGRAM
2 s = socket(AF_INET, SOCK_DGRAM)
3 s.bind(('127.0.0.1', 0))
4 server = ('127.0.0.1', 8888)
5 s.sendto("CS352-2021", server)
6 data, addr = s.recvfrom(1024)
7 print("received", data, "from", addr)
8 s.close()
```

Below the editor, the `TERMINAL` panel is open, showing the execution of the script. The output is:

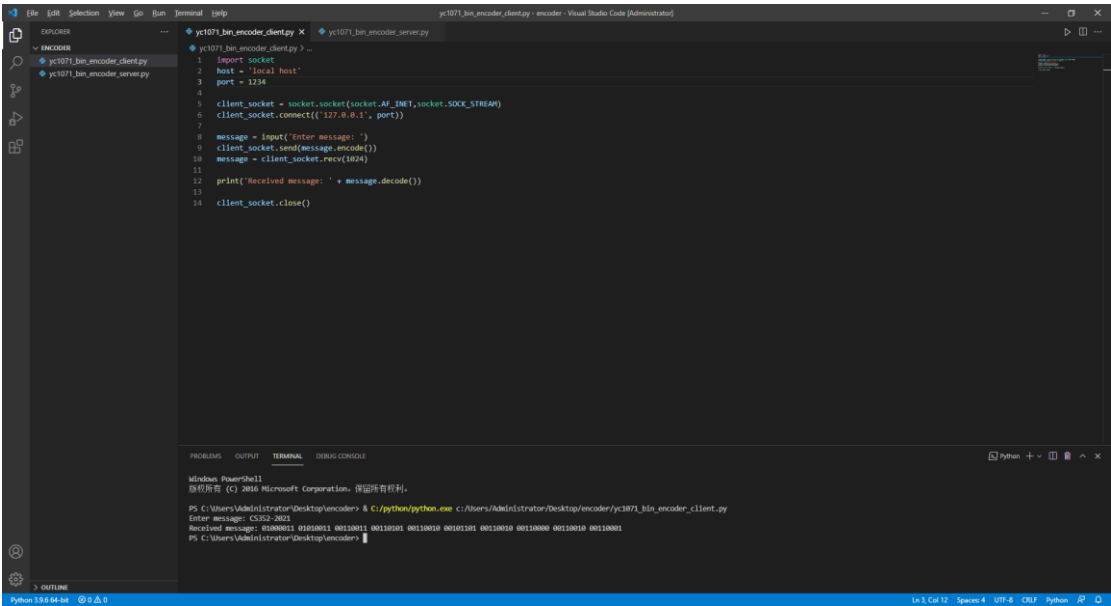
```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\yutin\Desktop\python\server_client> & C:/Python27/python.exe c:/Users/yutin/Desktop/python/server_client/udpclient.py
('received', 'CS352-2021', 'from', ('127.0.0.1', 8888))
PS C:\Users\yutin\Desktop\python\server_client>
```

2. The Binary Encoding Server

a.



The screenshot shows the Visual Studio Code interface with two Python files open: `yc1071_bin_encoder_client.py` and `yc1071_bin_encoder_server.py`. The server code is as follows:

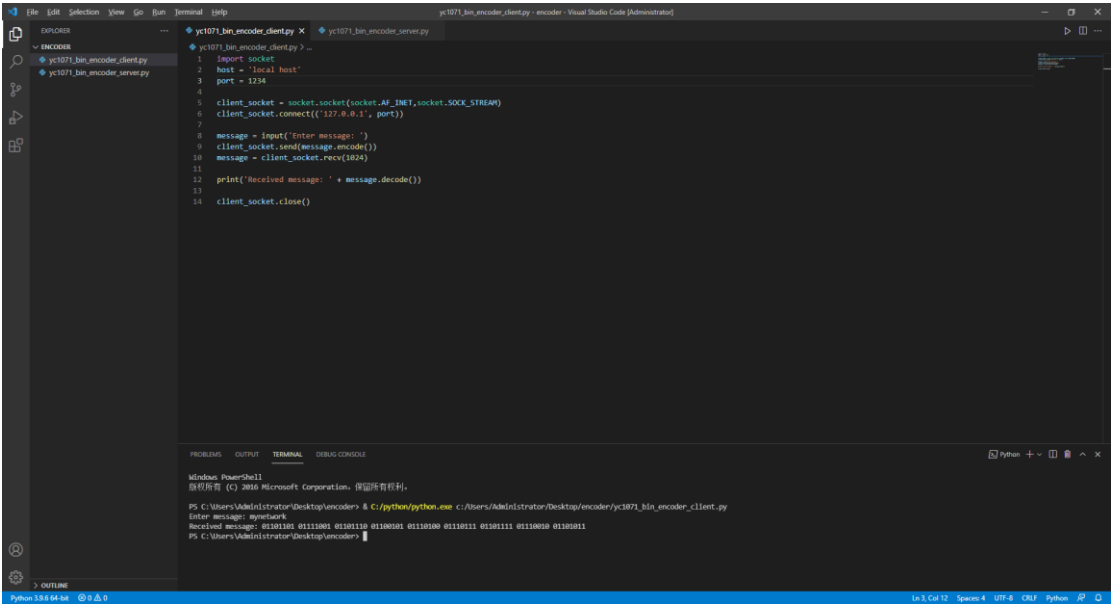
```
1 import socket
2 host = 'local host'
3 port = 1234
4
5 client_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
6 client_socket.connect(('127.0.0.1', port))
7
8 message = input('Enter message: ')
9 client_socket.send(message.encode())
10 message = client_socket.recv(1024)
11
12 print('Received message: ' + message.decode())
13
14 client_socket.close()
```

The terminal output shows the following sequence of events:

```
Windows PowerShell
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PS C:\Users\Administrator\Desktop\encoder> & C:/python/python.exe c:/Users/Administrator/Desktop/encoder/yc1071_bin_encoder_client.py
Enter message: CS352-2021
Received message: 00000011 00100011 00110011 00110011 00110010 00110010 00110010 00110010 00110010 00110010
PS C:\Users\Administrator\Desktop\encoder>
```

b.



The screenshot shows the Visual Studio Code interface with the same two Python files open. The server code is identical to the previous screenshot. The terminal output shows a different message being received:

```
Windows PowerShell
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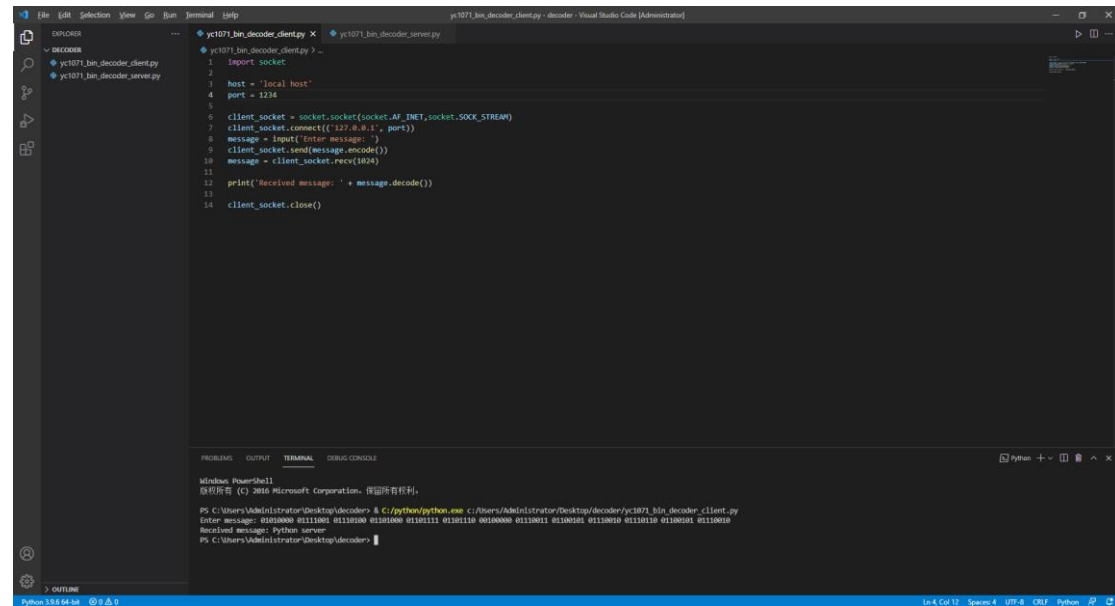
PS C:\Users\Administrator\Desktop\encoder> & C:/python/python.exe c:/Users/Administrator/Desktop/encoder/yc1071_bin_encoder_client.py
Enter message: mynetwork
Received message: 01001101 01111001 01101110 01100101 01110010 01110011 01110010 01110010 01110010 01110011
PS C:\Users\Administrator\Desktop\encoder>
```

c. Port: 1234

Host Address: 127.0.0.1

3. The Binary Decoding Server

a.



The screenshot shows the Visual Studio Code editor with two Python files open: `yc1071_bin_decoder_client.py` and `yc1071_bin_decoder_server.py`. The server code is as follows:

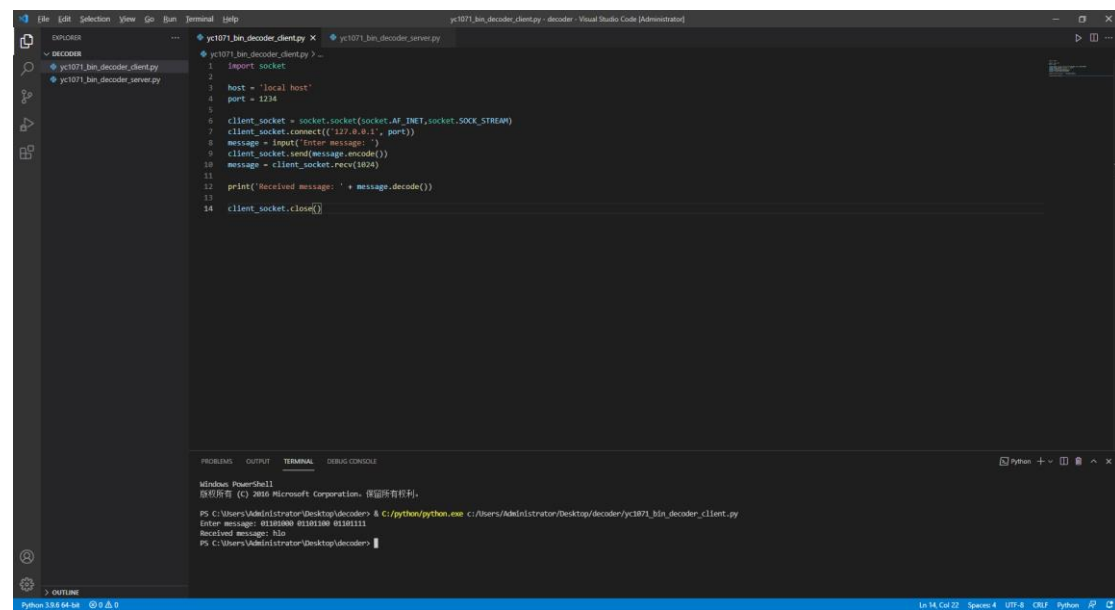
```
1 import socket
2
3 host = 'local host'
4 port = 1234
5
6 client_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
7 client_socket.connect(('127.0.0.1', port))
8 message = input("Enter message: ")
9 client_socket.send(message.encode())
10 message = client_socket.recv(1024)
11
12 print("Received message: " + message.decode())
13
14 client_socket.close()
```

The terminal output shows the following commands and results:

```
Windows PowerShell
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PS C:\Users\Administrator\Desktop> cd /python/python.exe c:\Users\Administrator\Desktop> cd decoder> .\yc1071_bin_decoder_client.py
Enter message: 01000000 01110001 01100000 01100111 01100110 00100000 01110001 01000101 01100110 01110010 01100101 01110010
Received message: Python server
PS C:\Users\Administrator\Desktop> cd decoder>
```

b.



The screenshot shows the Visual Studio Code editor with the same two Python files. The server code is identical to the previous one. The terminal output shows the following commands and results:

```
Windows PowerShell
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PS C:\Users\Administrator\Desktop> cd /python/python.exe c:\Users\Administrator\Desktop> cd decoder> .\yc1071_bin_decoder_client.py
Enter message: 01100000 01100110 01100111
Received message: h2o
PS C:\Users\Administrator\Desktop> cd decoder>
```

c. Port: 1234

Host Address: 172.0.0.1