

```

1  import socket
2
3  # Global Variables
4  host = None
5  port = None
6
7
8  # Create Socket
9  def socket_create():
10     global host
11     global port
12     global s
13     host = ''
14     port = 1001
15
16     try:
17         s = socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
18         s.setsockopt(socket.SOL_SOCKET, socket.SO_REUSEADDR, 1)
19     except socket.error as msg:
20         print("Socket creation error: " + str(msg))
21
22
23  # Bind to Socket
24  def socket_bind():
25     global host
26     global port
27     global s
28
29     try:
30         s.bind((host, port))
31         print("The server is ready to receive")
32     except socket.error as msg:
33         print("Socket binding error: " + str(msg))
34
35
36  # State 0
37  def state0():
38     global s
39
40     try:
41         data, addr = s.recvfrom(2048)
42         print("IP: " + addr[0] + " | Port: " + str(addr[1]))
43         print("Message: " + str(data.decode('utf-8')))
44     except socket.error as msg:
45         print(str(msg))
46
47     return state0
48
49
50  # Main Function
51  if __name__ == "__main__":
52     global s
53
54     # created socket
55     socket_create()
56     # bind socket
57     socket_bind()
58
59     # Initial State
60     state = state0
61     while state:
62         state = state() # FSM Loop
63
64     s.close()
65     print("FSM Done")
66

```