5-1 ICMP选做实验报告

1. 代码思路

假设在实际运行中，收到的ICMP报文内容已经包含了ICMP Type，我们只需要在原框架中的ReceiveOnePing中对ICMP Type和ICMP Code进行解析并打印即可。

2. 代码内容

```python
#print(icmpType, icmpId, ID, icmpSequence, sequence)
if icmpType == 0 and icmpId == ID and icmpSequence == sequence:
    return timeReceived, ip_TTL, icmp_length
else:
    print("Error: ICMP Type {}, Code {}".format(icmpType, icmpCode))
    if icmpType == 3 and icmpCode == 0:
        print("Desitination Network Unreachable")
    elif icmpType == 3 and icmpCode == 1:
        print("Destination Host Unreachable")
    elif icmpType == 3 and icmpCode == 3:
        print("Destination Port Unreachable")
    elif icmpType == 3 and icmpCode == 6:
        print("Destination Network Unknown")
    elif icmpType == 3 and icmpCode == 7:
        print("Destination Network Unknown")
    elif icmpType == 4 and icmpCode == 0:
        print("Source Quench")
    elif icmpType == 8 and icmpCode == 0:
        print("Echo Request")
    elif icmpType == 9 and icmpCode == 0:
        print(" Route Advertisement")
    elif icmpType == 10 and icmpCode == 0:
        print("Route Discovery")
    elif icmpType == 11 and icmpCode == 0:
        print("Time-To-Live Exceeded")
    elif icmpType == 12 and icmpCode == 0:
        print("IP Header Corruption")
    return None
```