实验四

Wireshark Lab: UDP

阅读对UDP的介绍，然后按照任务中的指导进行操作。打开Wireshark，在其中捕捉一些UDP数据包，筛选出来，并查看详细信息。

回答问题：

1.

一共4个字段，为Source Port(源端口号)，Destination Port(目的端口号)，Length(长度)，Checksum(校验和)

2. 同1，是8byte

3. Length的长度是UDP报文的字节数

4. 可以根据Length计算得出，Length字段2byte，所以UDP负载为$2^{16} - 8 = 65528$个字节

5. 类似的，端口号从0开始，所以最大端口号应为$2^{16} - 1 = 65535$

6.

由图知协议号十进制为17，十六进制就是0x11

7. 两者的源端口号和目的端口号是互换的

7711 26.311945	61.137.200.3	114.214.173.99
7712 26.312319	114.214.173.99	61.137.200.3
7713 26.312363	114.214.173.99	61.137.200.3
7714 26.534671	61.137.200.3	114.214.173.99
7715 26.535159	114.214.173.99	61.137.200.3
7716 27.742382	114.214.173.99	61.137.200.3

> Internet Protocol Version 4, Src: 114.214.173.99, Dst: 61.137.200.3
> User Datagram Protocol, Src Port: 63674, Dst Port: 40131
    Source Port: 63674
    Destination Port: 40131
    Length: 65
    Checksum: 0x2619 [unverified]
    [Checksum Status: Unverified]
    [Stream index: 22]
    > [Timestamps]
    UDP payload (57 bytes)

7710 26.311927	61.137.200.3	114.214.173.99	DT
7711 26.311945	61.137.200.3	114.214.173.99	DT
7712 26.312319	114.214.173.99	61.137.200.3	DT
7713 26.312363	114.214.173.99	61.137.200.3	DT
7714 26.534671	61.137.200.3	114.214.173.99	ST
7715 26.535159	114.214.173.99	61.137.200.3	ST
7716 27.742382	114.214.173.99	61.137.200.3	ST

> Frame 7714: 138 bytes on wire (1104 bits), 138 bytes captured (1104 bits)
> Ethernet II, Src: Hangzhou_91:72:e2 (5c:dd:70:91:72:e2), Dst: ASIXElec_4b:
> Internet Protocol Version 4, Src: 61.137.200.3, Dst: 114.214.173.99
> User Datagram Protocol, Src Port: 40131, Dst Port: 63674
    Source Port: 40131
    Destination Port: 63674
    Length: 104
    Checksum: 0xbf95 [unverified]
    [Checksum Status: Unverified]
    [Stream index: 22]
    > [Timestamps]
    UDP payload (96 bytes)