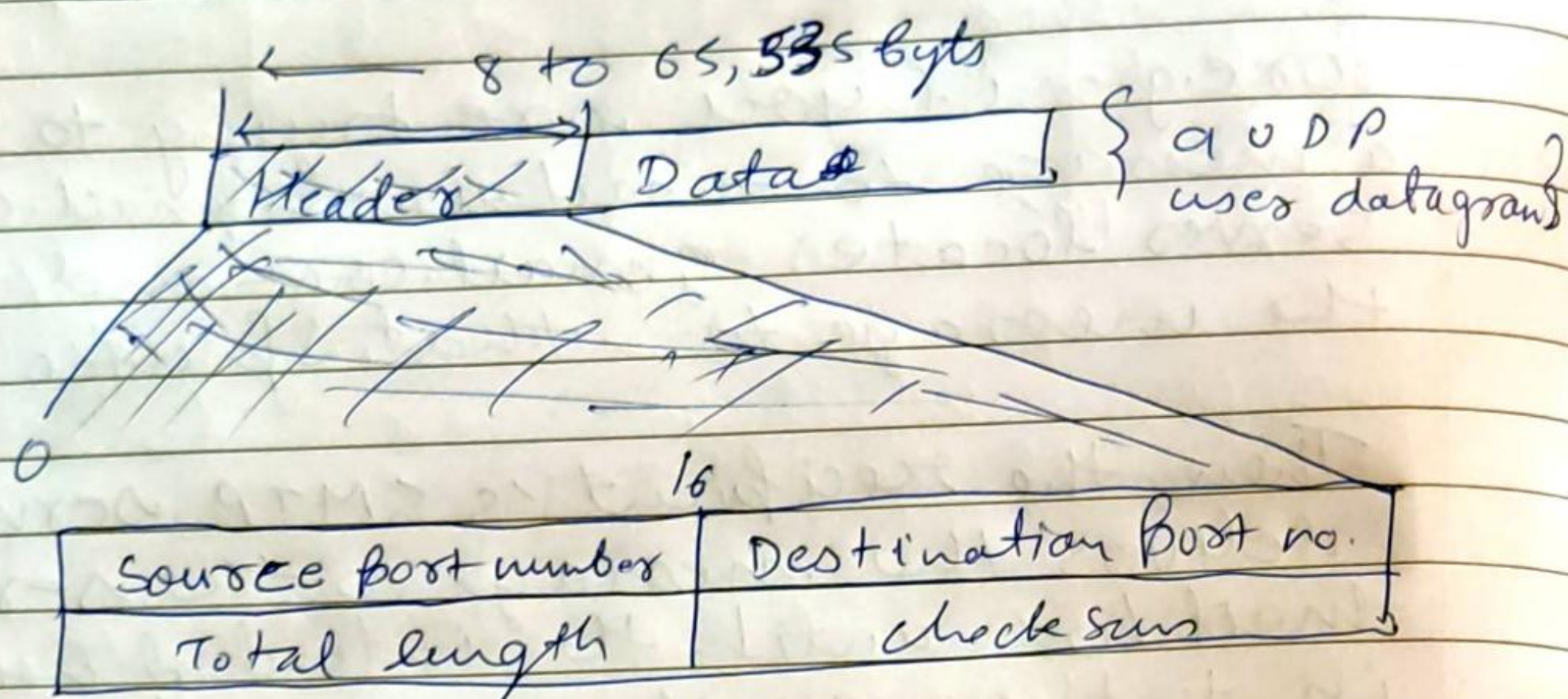


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2(a) UDP packets, called user Datagram, have a fixed size header of 8 bytes made of four fields, each of 2 bytes (16 bits).



### Header format

The first two fields defines the sources & destination port number. The third field defines the total length of the user datagram header plus data. The 16 bits can define a total length of 0 to 65,535 bytes.

Source port:- The port of the device sending data. This field can be set to zero if the destination computer doesn't need to reply to the sender.

Destination port:- The port of the device receiving data. UDP port numbers can be b/w 0 & 65,535.

length:- Specifies the number of bytes ~~comprising~~ comprising the UDP header & the UDP



payload data.

The limit for the UDP length field is determined by the underlying IP Protocol used to transmit data.

checksum:- The checksum allows the receiving device to verify the integrity of the packet header & payload.

User Datagram Protocol (UDP) has attributes that make it beneficial for use for applications that can ~~to~~ tolerate lost data. This is why UDP doesn't guarantee the packets will get to the right destinations. This means UDP doesn't connect to the receiving computer directly which TCP does. Rather, it sends the data out & relies on the devices involved the sending & receiving computers to connectivity get the data when it's supposed to go.

Although this transmission method doesn't guarantee that the data being sent will reach its destination, it does have low overhead & is popular for services that don't absolutely have to work the first time.



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②(b)

16 bits Blocks

HEX Values

10	17
43	192
192	168
1	47
0	17
00	18
00	69
65000	
00	18
00	00
C	0
V	I
S	H
I	E
L	D

0	A	1	1
2	B	C	0
C	0	A	8
0	1	2	F
0	0	1	1
0	0	1	2
0	0	4	5
F	D	E	8
0	0	1	2
0	0	0	0
4	3	4	F
<del>5</del>	<del>6</del>	<del>4</del>	<del>8</del>
<del>5</del>	<del>3</del>	<del>4</del>	<del>8</del>
4	9	4	5
4	C	4	4

3 7 8 7 3  
→ 3

Wrapped Sum

7 8 7 6

check Sum

8 7 8 9