# Računarska tehnika i računarske komunikacije **Osnovi računarskih mreža 2**

## Vežba 6 – Dodatak

			OSI Model					
	Layer	Data unit	Function <sup>[3]</sup>	Examples				
	7. Application		High-level APIs, including resource sharing, remote file access, directory services and virtual terminals	HTTP, FTP, SMTP				
Host	6. Presentation	Data	Translation of data between a networking service and an application; including character encoding, data compression and encryption/decryption	ASCII, EBCDIC, JPEG				
layers	5. Session		Managing communication sessions, i.e. continuous exchange of information in the form of multiple back-and-forth transmissions between two nodes	RPC, PAP				
	4. Transport	Segments	Reliable transmission of data segments between points on a network, including segmentation, acknowledgement and multiplexing	TCP, UDP				
	3. Network	Packet/Datagram	Structuring and managing a multi-node network, including addressing, routing and traffic control	IPv4, IPv6, IPsec, AppleTalk				
Media layers	2. Data link	Bit/Frame	Reliable transmission of data frames between two nodes connected by a physical layer	PPP, IEEE 802.2, L2TP				
	1. Physical	Bit	Transmission and reception of raw bit streams over a physical medium	DSL, USB				

#### **TCP Header**

Offsets	Octet	(				1	I				2 3													
Octet	Bit	0 1 2 3	4 5 6	7	8	9	10	11	12	13	14	15	15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31										
0	0		So	urc	еро	ort						Destination port												
4	32		Sequence number																					
8	64	Acknowledgment number (if ACK set)																						
12	96	Data offset	Reserved	C W R	E C E	U R G	A C K	P S H	R S T	Y	F I N	I Window Size												
16	128		С	hec	ksu	m							Urgent pointer (if URG set)											
20	160		Opti	ons	(if d	data	off.	set	> 5.	. Pa	adde	ed a	d at the end with "0" bytes if necessary.)											
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### UDP Header

Offsets	Octet	0 1													2									3									
Octet	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0	0							So	urci	е ро	ort							Destination port															
4	32		Length												Checksum																		

#### IPv4 Header Format

Offsets	Octet					0				1									2									3								
Octet	Bit	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	2	25 2	:6	27	28	29	30	31		
0	0		Version IHL DSCP ECN														N Total Length																			
4	32		Identification														F	Flag	Flags Fragment Offset																	
8	64			Tir	ne '	То	Live						Prot	осо				Header Checksum																		
12	96														S	ouro	e II	⊃ Ai	ddr	ess																
16	128														Des	stina	tior	i IP	Ad	dres	3S															
20	160														0	ptio	าร (	(if IH	HL >	> 5)																

