This is code for UDP implementation

run make

keep the server and client in separate directories for seeing file transfer
then type following in command line:

./udps 4000
(in server terminal)

./udpc (server_Ip) 4000
sample.txt
(in client terminal)

....

sample.txt is filename
any ohter file of any type can be sent

server_ip must be replcaed by actual server_ip

....

UDP wireshark inspection :

A total of 1248 packets were sent via the client to server while sending a 1.4 Mb file
A few are displayedd here :

No.	Time	Source	Destination	Protocol	Length	Source Port Destination Port Info
146	14.558737000	10.109.17.47	10.109.12.52	UDP	62	Source port: 38186 Destination port: 4000
148	14.564174000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
150	14.564662000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
152	14.565071000	10.109.17.47	10.109.12.52	ICQv2	1066	ICQ Version 2 protocol
154	14.565920000	10.109.17.47	10.109.12.52	ICQv3	1066	ICQ Version 3 protocol
156	14.566407000	10.109.17.47	10.109.12.52	ICQv4	1066	ICQ Version 4 protocol
158	14.566888000	10.109.17.47	10.109.12.52	ICQv5	1066	ICQv5 Unknown[Malformed Packet]
160	14.567512000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
162	14.567971000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
164	14.568404000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
166	14.568843000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
168	14.569249000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
170	14.569647000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
172	14.570057000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
174	14.570480000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
176	14.570956000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
178	14.571399000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000
180	14.571905000	10.109.17.47	10.109.12.52	UDP	1066	Source port: 38186 Destination port: 4000

for whole summary check udp_cl-serv.pcapng attached

A total of 1249 packets were received from the server :

A few are displayed

No.	Time	Source	Destination	Protocol	Length	Source Port	Destination Port	Info
147	14.558874000	10.109.12.52	10.109.17.47	UDP	45			Source port: 4000 Destination port: 38186
149	14.564254000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
151	14.564700000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
153	14.565112000	10.109.12.52	10.109.17.47	ICQv2	46			ICQ Version 2 protocol
155	14.565983000	10.109.12.52	10.109.17.47	ICQv3	46			ICQ Version 3 protocol
157	14.566454000	10.109.12.52	10.109.17.47	ICQv4	46			ICQ Version 4 protocol
159	14.566936000	10.109.12.52	10.109.17.47	ICQv5	46			ICQ Version 5 protocol[Malformed Packet]
161	14.567576000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
163	14.568015000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
165	14.568452000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
167	14.568889000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
169	14.569300000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186
171	14.569689000	10.109.12.52	10.109.17.47	UDP	46			Source port: 4000 Destination port: 38186

for whole summary check udp_serv-cl.pcapng attched

The packet length distribution was as follows

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Packet Lengths:
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Topic / Item	Count	Average	Min val	Max val	Rate (ms)	Percent	Burst rate	Burst start
Packet Lengths	2497	1110.59	45	1066	5.2433	100%	5.5700	14.750
0-19	0	-	-	-	0.0000	0.00%	-	-
20-39	0	-	-	-	0.0000	0.00%	-	-
40-79	1250	46.03	45	66	2.6248	50.06%	2.7800	14.745
80-159	0	-	-	-	0.0000	0.00%	-	-
160-319	0	-	-	-	0.0000	0.00%	-	-
320-639	0	-	-	-	0.0000	0.00%	-	-
640-1279	1247	1065.79	802	1066	2.6185	49.94%	2.7900	14.750
1280-2559	0	-	-	-	0.0000	0.00%	-	-
2560-5119	0	-	-	-	0.0000	0.00%	-	-
5120-4294967295	0	-	-	-	0.0000	0.00%	-	-

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Ack messages were sent in 46 byte packets (except the md5 checksum meassage)
the file transfer data was sent in 1066 byte packets(except the last one which was less than 1066)

Total time taken for file transfer was 15.030-14.558
=0.472s