Modify ping.c program to make it able to receive ethernet frames from the network and calculate the following statistics:

on all ethernet packets:

% frames containing IP packets

% frames containing ARP packets

% frames containing neither IP nor ARP

packets On all IP

packets% packets containing TCP segments

% packets containing UDP segments

% packets containing ICMP packets

% packets containing other payload

The program receives 1000 packets from the network, counts and, after receiving the thousandth, writes the statistics.