

# SysV IPC Message Queues - Step 1

## Classwork exercise

### Exercise Definition

Write two programs: Ping and Pong as follows:

- Single Writer and Single Reader with echo (Request / Response) protocol. Should be run in two terminals concurrently
- Ping sends a specified number of messages to Pong, following with an EOF notification message.
- Pong waits for the message and responds to it, unless it is an EOF message.
- Pong should listen to both message and specified EOF channel in a single `msgrcv` call.

### Instructions

PingPong.h file should include the specifics of the protocol (message layout, types, etc) and be included in both Ping.c and Pong.c

Create makefile accordingly to build both Ping and Pong applications.

### Options (command arguments)

Ping (Write) options:

- v verbose
- c create message queue object before starting work, exclusively, i.e. if already exists return error
- d delete message queue after finishing work
- f filename for queue key (ftok), define default
- n number of messages to send
- e if present - send EOF notification in a separate channel  
if absent - send EOF notification in message body
- s work simulation (in msec)

Pong (Echo) options:

- v verbose
- f filename for queue key (ftok), define default!
- s work simulation (in msec)