## **Computer Networks HW3 Report**

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### **Program Execution**

- 1. Executing Makefile Inside
  - \$ make

(This will generate 3 executable file sender, agent, receiver)

2. Execution Order (Important!)

```
receiver \rightarrow agent \rightarrow sender
```

- Receiver Execution
- \$ ./receiver <agent IP> <agent port> <receiver port>

(Example)

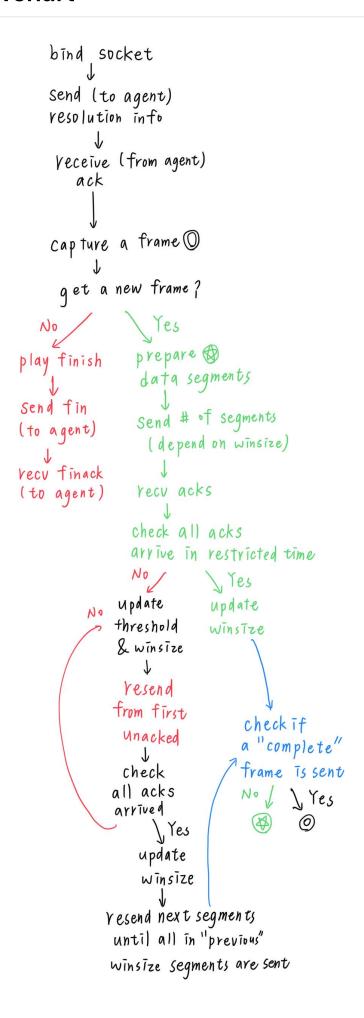
- \$ ./receiver local 8888 8889
- Agent Execution
- \$ ./agent <sender IP> <recv IP> <sender port> <agent port> <recv port>
  (Example)
- \$ ./agent local local 8887 8888 8889 0.3
- Sender Execution
- \$ ./sender <agent IP> <sender port> <agent port> <file path>

(Example)

\$ ./sender local 8887 8888 tmp.mpg

#### **Sender Flowchart**

# Sender



#### **Receiver Flowchart**

```
Receiver
                     bind socket
                    receive (from agent)
                     resolution info
                        Send ack
                             (to agent)
                       receive segment
                            (from agent)
                         check if
                         fin = 1
                                   send finack
                check seq. #
                                  to agent
                is correct
              NO
             Drop
                         Save
           send last
                         send current
                         acked seq. #
           acked seq.#
                          to agent
           to agent
                         check if
                         buffer is full
                       No/ Yes
                             flushing data
                               - if imabuf is full,
                                show image and clear imabut
                               _ if new segment arrived,
                                 always drop it
                                (until flush complete)
                              flush complete
```

