Development notes

Transport

TODO:

x test udp socket by printing incoming data ? implement packet end detection - implement packet class

Flow control

Receiving

- Packet arrives
- (optionally) Decrypt payload ? verify checksum
- Check flags
- `if ACK:`
  - Everything up to packet with SEQ is good
  - Delete every packet with no. less than SEQ from `window`
- `if NACK:`
  - Re-transmit packet with SEQ
  - Prepend packet with SEQ to `txqueue`
- `if !(ACK || NACK):`
  - Send ACK
  - Pass payload on to business logic
  - `if SEQ > lastreceived + 1:`
    - `if len(lastreceived) == 0:`
      - send `NACK`
    - insert in `rxbuffer`
  - `else:`
    - `lastreceived = SEQ`
  - if packet with no. `lastreceived + 1` in `rxbuffer`:
    - pass rxbuffer to businesslogic

Sending

Threaded loop: - pop Packet from `txqueue` - add timeout time to Packet - transmit packet - `for packet in window:` - `if currenttime > packet.timeout:` - append packet to `txqueue` - `if len(window) < WSIZE:` - construct new packet - append to window - append to `txqueue`