**Homework 3 - Reliable UDP**

Design a program that sends a file on UDP which also provides reliability.

Sender class:

1. Ask a file from user

2. Convert file into byte array

3. Split byte array as 1000 bytes pieces

4. Set every pieces as datagram package

5. Send a package

6. Wait for ACK message

7. Go to *step 5*, if there is any package

8. Display “file has been sent messages” after all parts are transferred.

Receiver class:

1. Listen for packages

2. Receiver packages

3. Send ACK message

4. Assemble byte arrays (no need to implement this)

5. Save file to hard disk drive (no need to implement this)

6. Display “file has been received” after all parts are transferred.

Issues:

1. Receiver has to know how many parts will be transfer.

2. Define your message format (syntax) in a file (txt, docx) or in codes as comment.

3. In UDP, packages reaches to destination as unordered. So, it is a design problem when dropping a package. If receiver gets a datagram with no match number with its package counter, this does not mean that previous datagram has lost definitely. It may be reach later.

But in this work, you do not have to consider this to make this homework easy as possible.