B.  Give at least three reasons why IP does reassembly at the destination host rather than within routers. (4 points)

 1. packets gets lost

2. performance can lack

3. packets come in different order

C. Suppose that a TCP message containing 2048 bytes of application data and a 20 byte TCP header is passed down to IP for delivery across two networks (from the source host to a router to the destination host).  The message, as it is passed down from TCP to IP, would look like this:

The first network crossed has an MTU (frame payload maximum) of 4096 bytes; the second network has a 1024 byte MTU.  Each network’s MTU determines the maximum sized IP packet that can be transmitted, including the IP header (but not including the frame header).

Give the sizes and offsets for the sequence of IP packet fragments delivered up to the IP layer at the destination host.  Give the offset as an actual byte count (not the mod 8 value).  Assume that all IP headers are 20 bytes, and be careful when calculating the offset value (the Offset field in the IP header).  You may find it helpful to draw a picture of each fragment to visualize it.  You may also wish to refer to the Lecture 2 slide titled “Rules for Sizing Fragments”.  (6 points)

Sizes: 1000

Offset: 0

Sizes: 1000

Offset: 1000

Sizes: 68

Offset: 2000