Java, TCP, & UDP

- **Java's implementation of UDP is split into two classes:** `DatagramPacket` **and** `DatagramSocket.`

- `DatagramPacket` **stuffs bytes of data into UDP packets called <u>datagrams</u> and lets you unstuff datagrams you receive.**

- **A** `DatagramSocket` **sends as well as receives UDP datagrams.**

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- **To send data, you put the data in a** `DatagramPacket` **and send the packet using a** `DatagramSocket.`

- **To receive data, you receive a** `DatagramPacket` **object from a** `DatagramSocket` **and then read the contents of the packet.**

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- **This simple division of labor contrasts with the `Socket` and `ServerSocket` classes used by TCP.**

  - **UDP does not have any notion of a server socket.**

  - **TCP sockets allow you to treat a network connection as a stream. UDP doesn't allow this; you always work with packets.**

  - **A single `DatagramSocket` can send to and receive from many hosts. The socket isn't dedicated to a single connection as it is in TCP.**