2-Summarize the methods of DatagramSocket and DatagramPacket classes.

Java DatagramSocket class represents a connection-less socket for sending and receiving datagram packets. It is a mechanism used for transmitting datagram packets over network.`

A datagram is basically an information but there is no guarantee of its content, arrival or arrival time.

Commonly used Constructors of DatagramSocket class

- **DatagramSocket() throws SocketEeption:** it creates a datagram socket and binds it with the available Port Number on the localhost machine.
- **DatagramSocket(int port) throws SocketEeption:** it creates a datagram socket and binds it with the given Port Number.
- **DatagramSocket(int port, InetAddress address) throws SocketEeption:** it creates a datagram socket and binds it with the specified port number and host address.

Java DatagramPacket is a message that can be sent or received. It is a data container. If you send multiple packet, it may arrive in any order. Additionally, packet delivery is not guaranteed.

Commonly used Constructors of DatagramPacket class

- **DatagramPacket(byte[] barr, int length):** it creates a datagram packet. This constructor is used to receive the packets.

- **DatagramPacket(byte[] barr, int length, InetAddress address, int port):** it creates a datagram packet. This constructor is used to send the packets.

3-what is the Socket?

Sockets allow communication between two different processes on the same or different machines. To be more precise, it's a way to talk to other computers using standard Unix file descriptors. In Unix, every I/O action is done by writing or reading a file descriptor. A file descriptor is just an integer associated with an open file and it can be a network connection, a text file, a terminal, or something else.

To a programmer, a socket looks and behaves much like a low-level file descriptor. This is because commands such as read() and write() work with sockets in the same way they do with files and pipes.

4-what InetAddress is Used for?

The **java.net.InetAddress** class provides methods to get the IP address of any hostname. An IP address is represented by 32-bit or 128-bit unsigned number. InetAddress can handle both IPv4 and IPv6 addresses.