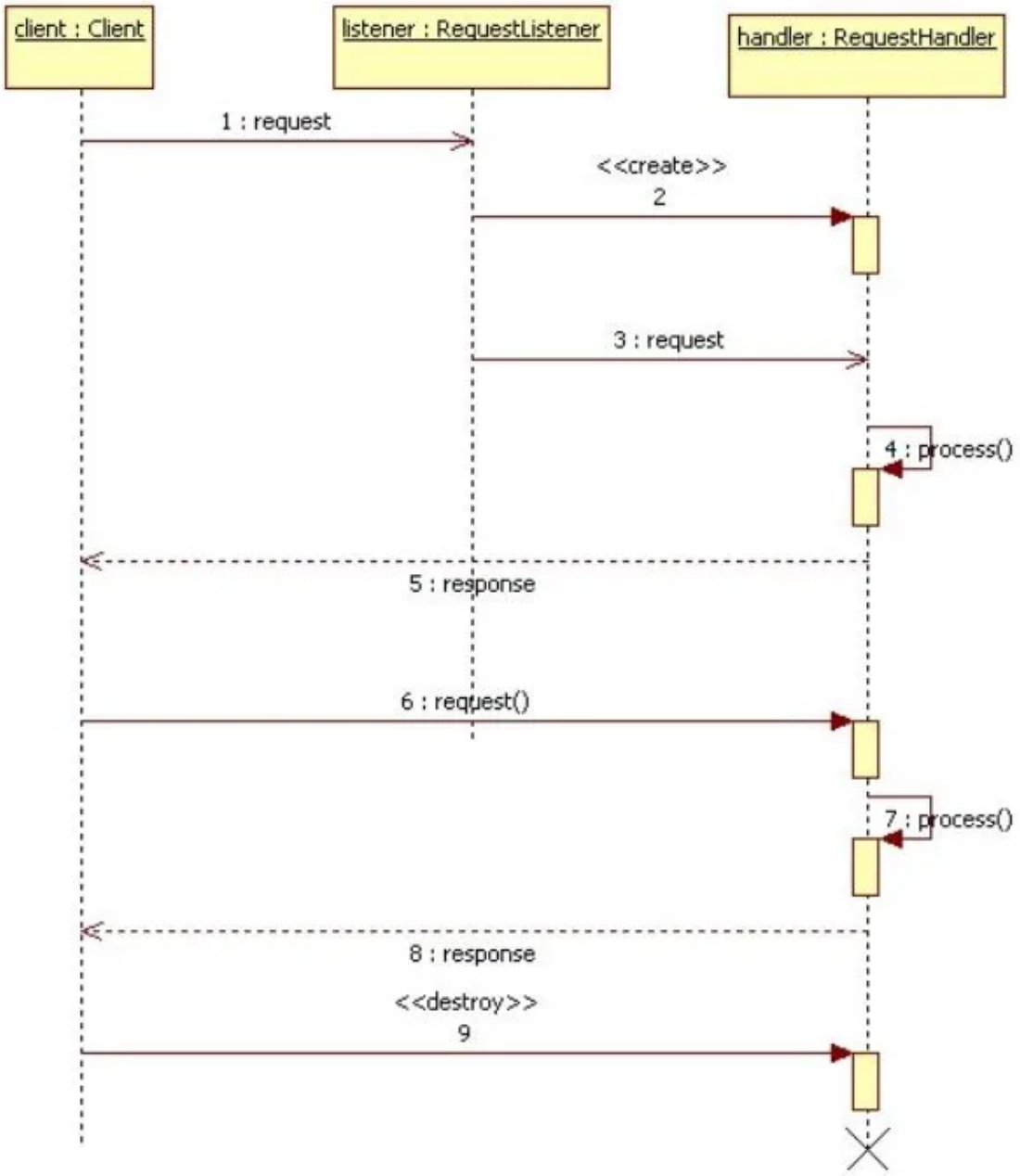
Client-Server Architecture

In this, the client contacts the server with a request and the server sends back the data requested. The client is smart enough to understand how to request the data, post-process it, format it, and then serve it to the end-user.

In order to simultaneously process requests from multiple clients, a server frequently uses the Master-Slave Pattern. In this case the Master continuously listens for client requests. When a request is received, the master creates a slave to process that request, and then resumes listening again. At the same time, the slave performs all subsequent communication with the client.

The below sequence diagram clearly explains a typical client-server interaction :



Advantages of Client-Server model

Centralization — The main advantage of client-server network is the centralized control. All the necessary information are placed in a single location.

Security — In client-server network, the data is well protected due to its centralized architecture.

Scalability — Client-Server networks are highly scalable. Whenever users need they can increase the number of resources such as clients and servers.

Disadvantages of Client-Server model

Traffic Congestion -The primary disadvantage of client server network is the traffic congestion.

Robustness-As we already know that client server networks are centralized. In case if the main server happens to undergo failure or interference, then the whole network will be disrupted.

Maintenance-When the servers are implemented, they generally work non-stop. This means that proper attention must be given to each server.