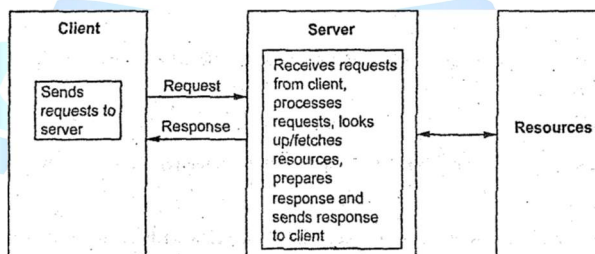


## IoT Communication Models

### IoT Communication Models

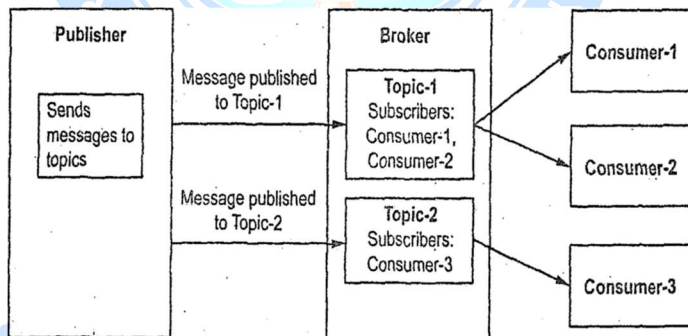
#### (i) Request- Response:

- Request-response is a communications model in which the client sends request to the server and the server responds to the requests.
- When the server receives a request, it decides how to respond, fetches the data, retrieves resource representations, prepares the response, and then sends the response to the client.
- It is a stateless communication model and each request-response pair is independent of others. Fig 10.5 shows the client-server interactions in the request-response model.



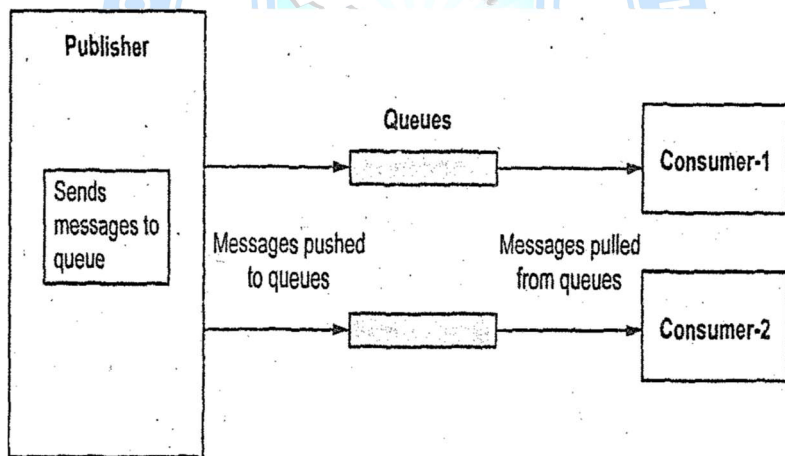
### (ii) Publish-Subscribe:

- It is a communication model that involves publishers, brokers and consumers. Publishers are the source of data and send the data to the topics which is managed by the broker. Publishers are not aware of the consumers.
- Consumers subscribe to the topics that are managed by the broker. Once the broker receives the data for a topic from the publisher, it sends the data to all the subscribed consumers.



### (iii) Push-Pull:

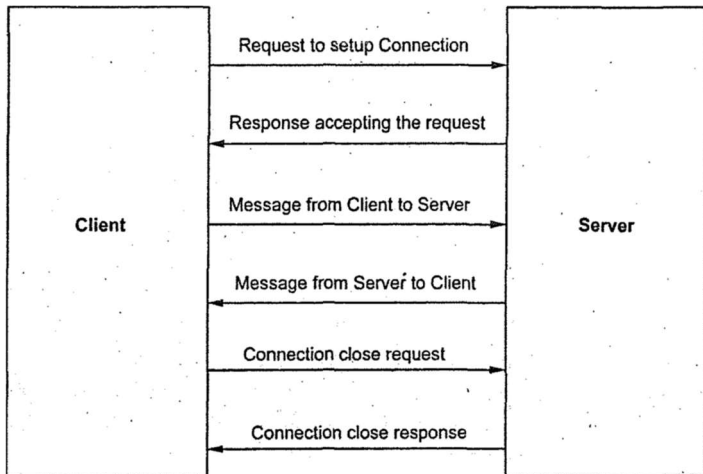
- Push- pull is a communication model in which the data producers pushes the data in to the queues and the consumers can pull the data from the queues.
- Queues help in decoupling the messaging between the producers and consumers. It also acts as a buffer which helps in situations when there is a mismatch between the rate at which the producers pushes the data and the rate at which the consumers pulls the data.



#### (iv) Exclusive Pair

- Exclusive pair is a bi-directional, fully duplex communication model that uses a persistent connection

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between the client and the server. Once the condition is  
setup it remains open until the client sends a request to  
close the connection. Client and server can send messages



to each other after connection setup.

- Exclusive pair is a stateful communication model and the server is aware of all the open connections. Fig shows the client-server interactions in the exclusive pair model.