Messaging Patterns

1. Fire and forget
2. Request response
3. Publish subscribe

Fire and forget

1. Client sends message
2. Queue confirms receipt
3. Handler retrieves message
4. Processes work
5. Handler confirms message complete

Request response

1. Client sends message + reply address
2. Handler retrieves message
3. Processes work
4. Sends response message
5. Client retrieves response message

Publish subscribe

1. Subscribers register with queue
2. Publisher sends message
3. Queue confirms receipt
4. Queue forwards message to subscribers

Handling Failures: Retries

1. Handler 1 retrieves message 1
2. Queue locks message 1 - But does not remove it
3. Handler 1 confirms complete
4. Queue removes message 1

Failed processing

1. Retries
2. Poison messages
3. The dead letter queue

Reliability

* Queue is durable, messages persisted until retrieved
* Queue is sequential, messages retrieved in send order
* Queue is not reliable, messages can be lost

**MessageQueue** class

Queue administration – create and modify, purge and delete

Message operations – send and receive

Default behaviour - XML serialization, Non-recoverable messages

**Message** class

Fine control – Serialization format, body content

Customized behaviour – Recoverable, Acknowledgement required