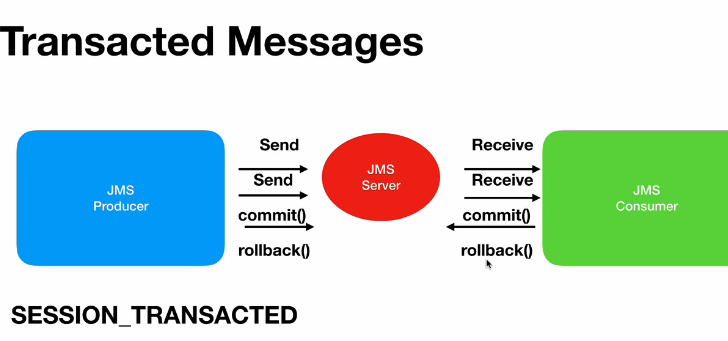
1. JMS Transactions
2. ActiveMQ uses **push-based** model for delivery of messages to consumers when the broker receives them.



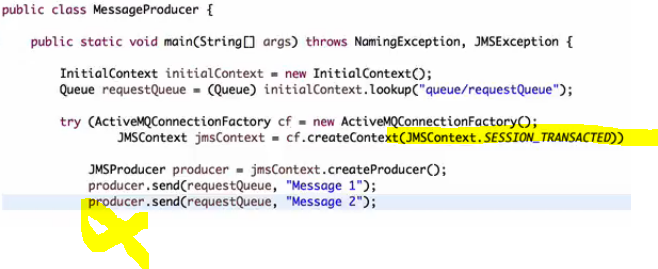
74.Comitting from producer side

In this case,

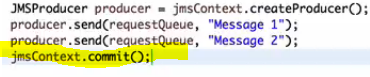
Even though producer says “producer.send(queuename,data)” the actual message wont go the

Queue, it will be stored in the cache, once producer says commit, then only all the messages will go into the jms provider,

* If you use **transaction** for sending messages, then the transaction boundary results in **synchronous communication** with message broker.



In the above case , none of the message will be delivered, because the producer didn’t committed the message



Use context.commit() to commit

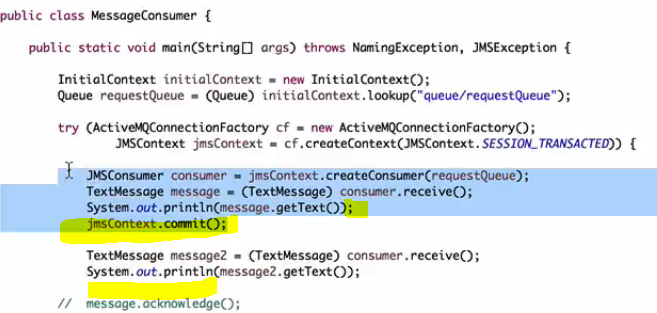
Once committed u can’t rollback,

75.comitting from consumer side

Similarly, even though consumer received the message, until the consumer says commit, the message will still present in the cache, jms think the message hasn’t been delivered, it will try to redeliver it again.

rollback

once rollbacked, all the messages present in the cache will be deleted and it wont go to the JMS server



In the above scenario, after receiving 1st message only, we are committing, means consumer is saying only 1 was received , bec he committed after receiving 1st message,

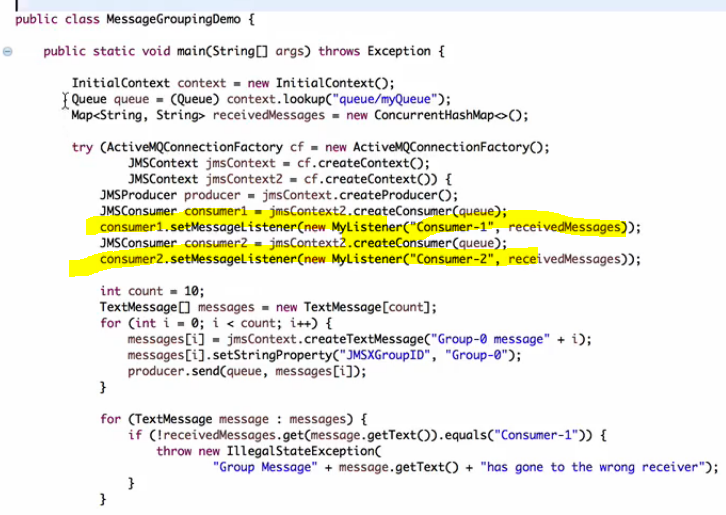
So 1st time, even though, both msgs were be received, but consumer sends acknowledgement only for 1 msg , 2nd once will still stays in the JMS Queue, when u run the same program for 2nd time it will still pull the message and then as we committed, then 2nd message also will be lost from JMS

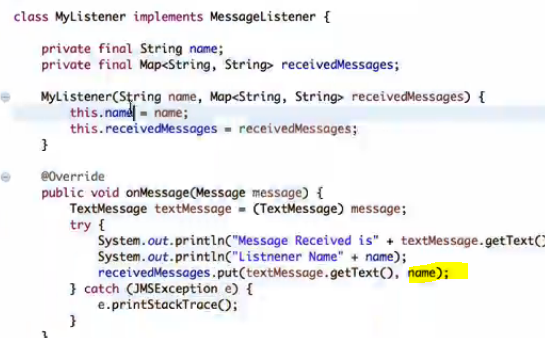
80. Grouping the messages

Even after grouping, we will send those messages individually, **but while sending we will send them with a selector,** so that all messages will go into the same queue.

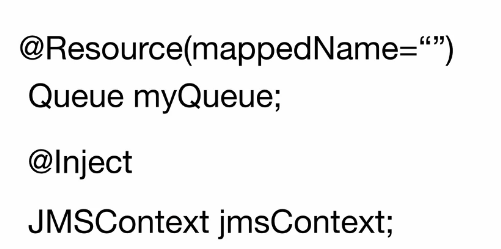
And while creating a consumer, we will create with that selector, so that only attaching records alone will be consumed by that queue.

**Even if multiple consumers are on listening queue, same group message will be received by same consumer**





JAVA EE changes



Sending to a queue



Message Redelivery and Dead-Letter Queue

* If the message gets expired and it doesn't get delivered then it is moved to dead-letter queue from where it can be consumed later or administered.
* Normally messages are re-delivered in the following scenarios like

1. A client uses transaction and calls **rollback()** function.
2. A client closes and using transactions before calling commit.- means consumer

After receiving the message also if he didn’t commit then msg, then will not be lost from the queue it will still present in the queue

1. A client is using CLIENT\_ACKNOWLEDGE on a session and also calling recover() on that session.

Lly, if he didn’t acknowledge the msg will still present in the queue.

* You can configure the client redelivery policy by using the following code snippet

RedeliveryPolicy policy = connection.getRedeliveryPolicy();

policy.setInitialRedeliveryDelay(500);

policy.setBackOffMultiplier(2);

policy.setUseExponentialBackOff(true);

policy.setMaximumRedeliveries(2);

Misc topics

* The default mode is **Persistent** mode. If the producer marks the message as persistent, then the message id persisted (stored) in a message store before it is sent to the consumer.
* Non-persistent messages are faster than persistent messages because of the two following reasons
* MessageProducer producer = session.createProducer(topic);
* producer.setDeliveryMode(DeliveryMode.NON\_PERSISTENT);

Persistent Messages

final MessageProducer producer = session.createProducer(topic);

producer.setDeliveryMode(DeliveryMode.NON\_PERSISTENT)

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