

## Project #6

### Amazon Availability Messaging

This assignment explores the topics of Publish / Subscribe messaging including unreliable delivery and out of order messaging.

Be extra vigilant about clarity and proof reading of your submission.

The assignment is to flesh out details of an Availability Service as discussed in class.

1 – provide a modified schema for a single ASIN on the server ( Basically adding Sequence number, Reference count, dirty flag etc as you think is needed to make the system work )

2 – Provide a list of relevant events, and the subsequent messages needed to main inventory info, and updating the Availability on the website.

- Examples of events - Order Created, Inventory Received in an FC, Shipment Created
- Note that you may need additional 'events' ( like Midnight occurring) that triggers messages.

3 – For each event, provide the message(s) that will be produced that will keep the availability appropriately up to date and notify the online boxes of changes to availability.

4 – For each message, give it's name, and describe the contents of the message using JSON format.

5 – Describe:

- who will be the subscriber of the message ( Obidos, Availability, FulfillmentCenter, OrdeProcessing).
- What the subscriber of a message will do when the message is received.

#### JSON Messge Format

{Name: >string> , Body{ <More Json>}}

- Name is the name of the pub-sub message that someone would subscribe to.
- Body is the body of the message ( standard json nomenclature)

Preliminary design due on the Discussion board by Sat 5/23

Comments by classmates due 5/24 ( Take the next two groups in order from your group)

Final project due 5/28

#### Extra Credit ( up to 10 points)

To assure availability, you have three services running at all times, all receiving update messages. How do you decide which service should send availability messages to the website. IE how do you know then the leader has died, and how do you decide on the new leader?