**Design:**

The 3 components of this project are -

* The Web Tier - contains the REST web services
* The EJB Tier - which contains
  + the session beans for the publisher, subscriber, message and word count
  + entity beans for the publisher, subscriber, message and word count.
* The Remote Interface - serves as an API for the EJB which is used by clients to interact with the EJB.
* **Web Tier -** 
  + **Publisher Service -** Contains a POST method to register the publisher and return the id of the publisher. Consumes the topic as a parameter and returns a long integer which is the id of the publisher.
  + **Subscriber Service -** Contains a POST method to register the subscriber and return the id of the subscriber. Consumes the topic as a parameter and returns a long integer which is the id of the subscriber.
  + **Message Service -** Contains 2 methods - one POST to publishContent with the messageContent and publisherId as a query parameter and returns void. The other GET to getLatestContent with the subscriberId as a Query Parameter which returns the message String.
  + **TopNWords Service -** Contains a GET method that takes N as an input parameter and returns a comma separated string of the top N popular words.
* **EJB Tier -** 
  + **Entity Beans -** 
    - Publisher Entity **-** id, topic
    - Subscriber Entity - id, topic, lastSeenMessageId
    - Message Entity - id, message
    - Topic Entity - topic, List<MessageEntity>
  + **Session Beans -**
    - Publisher Storage Bean - Creates and Persists the publisher entity on registration
    - Subscriber Storage Bean - Creates and Persists the subscriber entity on registration
    - Message Storage Bean - Creates and Persists the message entity when publish content is called with a message.
    - Topic Storage Bean - Creates a new topic entity when publishContent is invoked with a new topic, if the topic already exists, it appends a message to a topic.