Assignment Wk03: 02.01.2018 (due 02.08.2018 by 6:30pm)

DELIVERABLES:
- Write and submit a paper that summarizes the tutorials you were able to successfully execute and summarizes your experience and comments on the learnings
- Provide the URLs / links to the tutorial applications you deployed on your Bluemix instance, so that I can run and test
- Write and submit a paper that describes and summarizes Chatbots / Conversational Agents / Conversational UI (CUI) technology. In addition to your overview / summary on chatbots your paper must answer the following questions:
    1. What are the different types of chatbots with respect to representing and retrieving information and knowledge? What are the Pros and Cons? (Note: there are different categorizations – try to cover the major categories in the book chapters)
    2. What are the different models of control policies and control structures for chatbots? Discuss the specifics and pros and cons of the different types.
    3. You want to build a Conversational Agent for ordering pizza at Sbarro. Describe how you would architect your solution, how you would design and implement you dialog and solution if you were to use IBM Watson for the conversational and information extraction capabilities. Note: apply your knowledge learned from the tutorials and your Computer Science / Software Engineering experience from other classes and projects.
- NOTE: You should work together as the teams you formed. At the end you should submit your own work (no problem if there is a lot of overlap within the team)

TASKS:
1. Create your IBM Bluemix account and get / install your 6 month free student access code

To get your student access to IBM Bluemix and Watson Developer Cloud (WDC):
- On The Hub
  https://onthehub.com/ibm/
- UIC Specific Access "On the Hub"
  https://uic.onthehub.com/

- Step 1: Create your free 30-day Bluemix account at:
  https://bluemix.net/
  Note: MUST use your "uic.edu" university email as ID to get access to academic promotion
- Step 2: Get your academic promotion access from "On the Hub" (https://uic.onthehub.com/)
  Note: MUST use your "uic.edu" university email as ID to get access to academic promotion
  Renewable access -> 6-month access for students
- Step 3: Add the promotion code from "On the Hub" to the PROMO dropdown on
  https://bluemix.net/

2. Get started with Conversation Service, Natural Language Understanding (NLU) service, and Watson Knowledge Studio (WKS) by going through the IBM Watson tutorials

   Read / look at examples in the IBM Redbooks:
   ▪ Redbooks_Watson_Vol2_Conversation_sg248394.pdf
   ▪ Redbooks_Watson_Vol7_NLU_sg248398.pdf

Implement the following tutorials:

Conversation Service:
   ▪ Getting started with Conversation service tutorial
https://console.bluemix.net/docs/services/conversation/getting-started.html#gettingstarted

   ▪ Building a complex dialog tutorial:
https://console.bluemix.net/docs/services/conversation/tutorial.html#tutorial

   ▪ Building a client application tutorial:
https://console.bluemix.net/docs/services/conversation/develop-app.html#building-a-client-application

   ▪ Fork the code and deploy *to your Bluemix account* the Conversation Sample Application
https://github.com/watson-developer-cloud/conversation-simple

   ▪ Food Coach sample application (implement and deploy to your Bluemix account) (Conversation and Tone Analyzer)
      https://github.com/watson-developer-cloud/food-coach

Bonus 1:
   ▪ Chat bot that uses Conversation and the Weather API (Text message weather bot)
https://github.com/watson-developer-cloud/text-bot

Bonus 2:
   ▪ Deploying to a channel with the Conversation connector (e.g. deploy to Slack)
https://github.com/IBM-Bluemix-Docs/conversation/blob/master/conversation-connector.md
https://console.bluemix.net/docs/services/conversation/conversation-connector.html#deploying-to-a-channel-with-the-conversation-connector

Accessing Watson Developer Cloud (WDC) with API calls (use Software Development Kits – SDKs)
   ▪ Study the examples at:
https://github.com/watson-developer-cloud

Natural Language Understanding (NLU) Service:
- NLU Getting Started Tutorial

https://console.bluemix.net/docs/services/natural-language-understanding/getting-started.html#getting-started-tutorial

- Customizing NLU Tutorial (Deploy Custom WKS model to NLU)

https://console.bluemix.net/docs/services/natural-language-understanding/customizing.html#customizing

Watson Knowledge Studio (WKS) Tutorials
- https://console.bluemix.net/docs/services/knowledge-studio/tutorials-create-project.html#wks_tutintro
- https://console.bluemix.net/docs/services/knowledge-studio/tutorials-create-ml-model.html#wks_tutml_intro
- https://console.bluemix.net/docs/services/knowledge-studio/tutorials-create-rule-model.html#wks_tutrule_intro
- https://console.bluemix.net/docs/services/knowledge-studio/tutorials-bootstrap-annotation.html#wks_tutboot_intro

Using WKS custom machine-learning model in NLU
- https://console.bluemix.net/docs/services/knowledge-studio/publish-ml.html#wks_manlu
- https://console.bluemix.net/docs/services/knowledge-studio/rule-annotator-model-use.html#wks_rule_nlu

Other resources to check out:
- How we use IBM Watson speech-to-text to transcribe our classes

https://blog.rmotr.com/how-we-use-ibm-watson-speech-to-text-to-transcribe-our-classes-9f59cafdb4b0