2020 Fall CSE431 Assignments

# There are multiple opportunities for submitting assignments. Depending on dates we can earn:

* 50% bonus
* 25% bonus
* Regular mark
* No mark (becomes a self-practice work only)

**Submission link:**

<https://forms.gle/syD84TmTQsej7hcw6>

For group assignments, this form must be submitted by only ONE of the group members with the correct name and ID of everyone in the group.

For individual assignments, please submit your ones.

**Assignment 1 Task (individual)**

Write correct spelling of your last name and three alternative spellings.

Design a short RegEx that matches your last name or its alternative spellings.

For example, if you name is Hussain and THREE alternative spellings are Hosen, Hossen and Hossain. Your regex should match any of the FOUR. However, do not simply write like word1|word2|word3|word4. So, Hussain|Hossen|Hosen|Hossain is not an acceptable answer. It needs to be shorter.

Your submission is FIVE lines

line 1 to 4: FOUR words

line 5: one RegEx

**Dates**: Submit link of google doc /colab or git or any online doc viewing tool/URL

* **1st assignment, 50% bonus:** On or before Wednesday, November 11
* **1st assignment, 25% bonus:** On or before Saturday, November 14
* **1st assignment, Regular mark:** On or before Monday, November 16
* **1st assignment, No mark (becomes a self-practice):** On Tuesday, November 17 or afterwards

**Assignment 2 Project (group size of 1 to 6 members each)**

Implement the Edit distance algorithm **Java** or **Python** or **R** in a way that shows each step of the calculation of the table/2D array, decisions and calculation as a text output. Repeatedly print the array and and repeatedly print details of the calculations. Weights/cost: Insertion: 1, Deletion: 1, Substitution: 2.

**Reference:**

Watch Chapter 2 Minimum Edit Distance Discussion.mp4 from <https://drive.google.com/drive/u/2/folders/1fIlqbhXHqMyfyHtDzaQx9_pvkd550uup>

**Dates:** Submit link to your source code hosted on GitHub and test input.txt / output.txt and link to 5 min unlisted youtube demo of your program. Have all the links listed on both git and youtube description

**2nd assignment, 50% bonus:** On or before Monday, November 16

**2nd assignment, 25% bonus:** On or before Monday, November 23

**2nd assignment, Regular mark:** On or before Monday, November 30

**2nd assignment, No mark (becomes a self-practice):** On Tuesday, December 1 or afterwards

**Assignment 3 Project (group size of 1 to 6 members each)**

Make a mini program that mimics a chatbot. No intelligence is necessary. Use patterns and regex to reply to the user so that it seems like the chatbot is talking. It should be one single file in **Java** or **Python** or **R** that can be run locally. You may use external but public and open source libraries, however, it should run offline locally and both source and binary needs to be provided with detailed easy to follow instructions

**References**:

* SHRDLU, SHRDLV, TWDEMO from <http://maf.directory/misc/shrdlu.html>
* ELIZA
* <https://web.stanford.edu/~jurafsky/slp3/2.pdf>
* <https://web.stanford.edu/~jurafsky/slp3/26.pdf>

**Dates:** Submit link to your source code hosted on GitHub and test input.txt / output.txt and link to 5 min unlisted youtube demo of your program. Have all the links listed on both git and youtube description

**3rd assignment, 50% bonus:** On or before Wednesday, December 2

**3rd assignment, 25% bonus:** On or before Monday, December 7

**3rd assignment, Regular mark:** On or before Wednesday, December 9

**3rd assignment, No mark (becomes a self-practice):** On Thursday, December 10 or afterwards

**Assignment 4 Paper (individual)**

Choose two **NLP related** paper published in 2018/2019/2020

From <https://papers.nips.cc/>

or from <https://www.aclweb.org/anthology/>

and prepare a presentation slide (5 to 8 slides) at <http://docs.google.com/presentation/>

submit screen+audio recording (5 to 10 minutes) of your presentation via unlisted youtube link

Both the slides and the recording should end with the picture of your student ID card.

Guideline for reading a paper and presentation:

<https://people.cs.aau.dk/~hans/Dat5/slides.pdf>

**Dates:** Submit link to your 5 min presentation on youtube with the google slides presentation link in the description

**4th assignment, 50% bonus:** On or before Monday, December 14

**4th assignment, 25% bonus:** On or before Wednesday, December 16

**4th assignment, Regular mark:** On or before Monday, December 21

**4th assignment, No mark (becomes a self-practice):** On Tuesday, December 22 or afterwards

**Assignment 5 Term Report (group size of 1 to 6 members each)**

Choose **any one** of the chapters from below and prepare one-page short summary in the form of a “concept map”.

Chapter 5, 7 to 10, 12 to 16, 18 to 23, 25 to 27, Appendix A to B

**Recommended Reading:**

<https://learningcenter.unc.edu/tips-and-tools/using-concept-maps/>

**Submission format:**

Submit link to a unlisted 10 minutes youtube video presenting your work. In video the description, include your digitally editable and publicly viewable online link created at online sites like <https://www.lucidchart.com/pages/concept-map>

**5th assignment, 50% bonus:** On or before Monday, December 21

**5th assignment, 25% bonus:** On or before Wednesday, December 23

**5th assignment, Regular mark:** On or before Monday, December 28

**5th assignment, No mark (becomes a self-practice):** On Tuesday, December 29 or afterwards