Name of the Academic Program: B.Tech CSE (AI)

Course Code: BTCSEAI-607
Title of the Course: Speech & Natural Language Processing Laboratory
L-T-P: 0-0-4
Credits: - 02
(L=Lecture hours, T=Tutorial hours, P=Practical hours)

Course Outcomes:

Upon successful completion of the course, the students will be able to
CO1: Apply the concept of natural language processing (NLP) using Natural Language Toolkit (NLTK). (Cognitive level: Analyse)
CO2 Build text corpora with tokenization, Stemming, Lemmatization and apply visualization techniques. (Cognitive level: Understand)
CO3: Evaluate the classifiers and choose the best classifier. (Cognitive level: Create)
CO4: Analyze classifier Algorithm for speech recognition. (Cognitive level: Create)
CO5: Access WordNet and Treebank and apply regular expression pattern recognition methods. (Cognitive level: Apply)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	2	1	1	1	1	-	1	-	1	1	1	1	1
CO2	3	2	2	1	1	1	1	-	1	-	1	1	1	-	-
CO3	3	2	2	1	1	1	1	-	1	-	1	1	1	-	-
CO4	3	2	2	1	1	1	1	1	-	1	1	1	1	-	-
CO5	2	2	2	1	1	1	1	-	1	-	1	2	1	-	-

Each Course Outcome (CO) may be mapped with one or more Program Outcomes (POs). Write '3' in the box for 'High-level' mapping, 2 for 'Medium-level' mapping, 1 for 'Low'-level' mapping

List of Experiments:

Experiment No.1
Word Analysis; A word can be simple or complex

Experiment No.2
Word Generation; A word can be simple or complex

Experiment No.3
Implement a basic spelling corrector in Python

Experiment No.4
Write a code to remove stop words with NLTK in Python

Experiment No.5
Analyse text data using Constituency Parsing and Probabilistic Parsing

Experiment No.6
Find most similar sentence in the file to the input sentence

Experiment No.7
Chunking of text involves dividing a text into syntactically correlated words.

Experiment No.8
Chunking is an analysis of a sentence which identifies the constituents (noun groups, verbs, verb groups, etc.) which are correlated.

Experiment No. 9

Creating a basic chatbot using Python

Experiment No. 10

Implement Machine Learning based Text Classification in Python.

Teaching-Learning Strategies in brief

1. Build positive environment in the Lab.
2. Provide concrete basic and advanced knowledge of the subject.
3. Encourage to the students to ask more & more questions.
4. Motivate to the students to develop critical & strategic thinking.

Assessment methods and weightages in brief

1. By giving assignments.
2. By conducting quizzes.
3. By conducting viva.
4. By taking semester examination.
5. Internal assessment (25 Marks) & Semester Examination (75 Marks) &Total Marks-100.

Title

Aim

SW used:

Theory:

Commands used

Result :-

Conclusion: