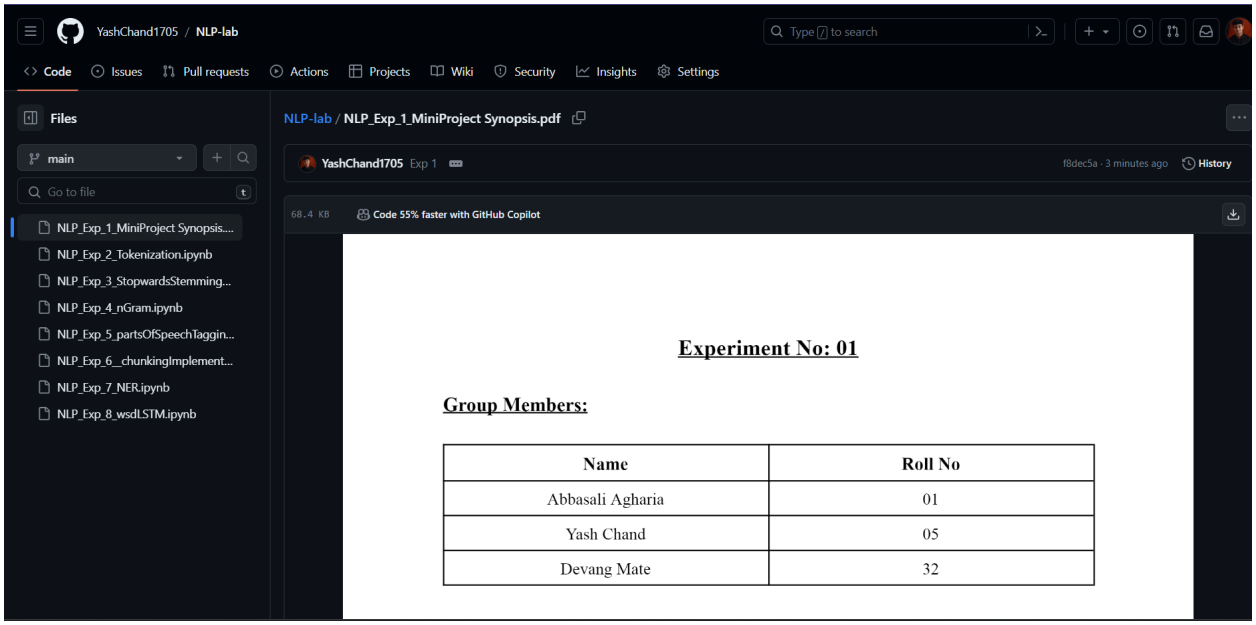
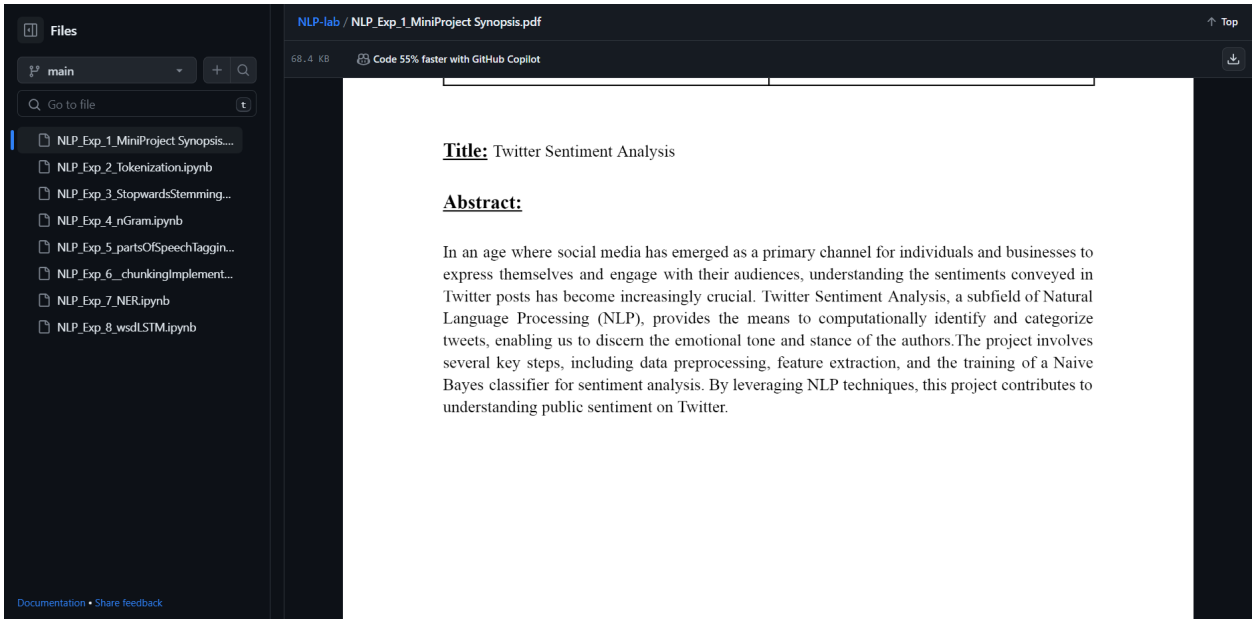
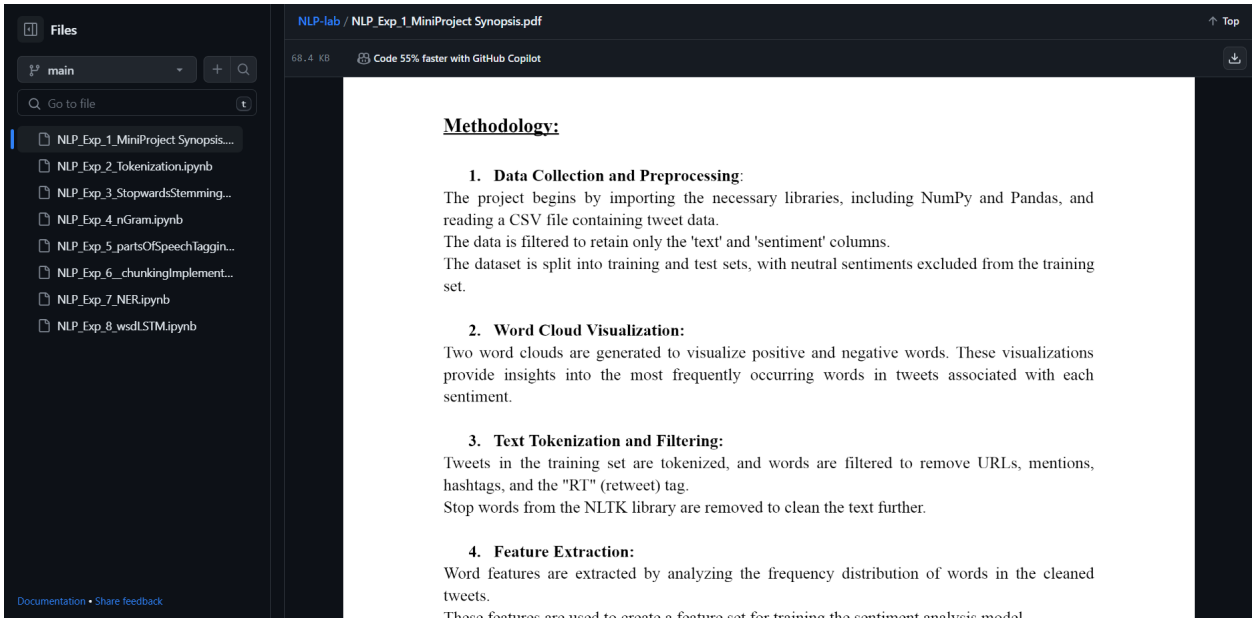
Experiment No: 01

URL:
https://github.com/YashChand1705/NLP-lab/blob/main/NLP_Exp_1_MiniProject%20Synopsis.pdf

Snapshot:







Methodology:

1. **Data Collection and Preprocessing**:

The project begins by importing the necessary libraries, including NumPy and Pandas, and reading a CSV file containing tweet data.
The data is filtered to retain only the 'text' and 'sentiment' columns.
The dataset is split into training and test sets, with neutral sentiments excluded from the training set.

2. **Word Cloud Visualization:**

Two word clouds are generated to visualize positive and negative words. These visualizations provide insights into the most frequently occurring words in tweets associated with each sentiment.

3. **Text Tokenization and Filtering:**

Tweets in the training set are tokenized, and words are filtered to remove URLs, mentions, hashtags, and the "RT" (retweet) tag.
Stop words from the NLTK library are removed to clean the text further.

4. **Feature Extraction:**

Word features are extracted by analyzing the frequency distribution of words in the cleaned tweets.
These features are used to create a feature set for training the sentiment analysis model.