**Exp 6: Topic Modeling: Identifying Patterns in Text Data**

import csv

import re

def identify\_patterns(csv\_file\_path, column\_name):

patterns = {}

with open(csv\_file\_path, 'r') as csvfile:

reader = csv.DictReader(csvfile)

for row in reader:

text = row[column\_name]

# Example pattern: finding words that start with 'pattern'

pattern\_matches = re.findall(r'Female', text, flags=re.IGNORECASE)

# Update patterns dictionary with matches

for match in pattern\_matches:

if match in patterns:

patterns[match] += 1

else:

patterns[match] = 1

return patterns

csv\_file\_path = '2b Social\_Network \_Ads.csv' # Update with your CSV file path

column\_name = 'Gender' # Update with the actual column name in your CSV file

result = identify\_patterns(csv\_file\_path, column\_name)

# Display the identified patterns and their counts

for pattern, count in result.items():

print(f"Pattern: {pattern}, Count: {count}")

**Output:**

Pattern: Female, Count: 204