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Roll No:-03   **Batch:**T3

Class: TY(CSE-AIML)

Experiment No. 13

Title :- Implement Inverted Index

Aim:- Demonstrate Inverted Index

Implementation:

```python
from collections import defaultdict

# Input quotes (like a table)
quotes = {
    101: "Winter is coming",
    102: "Chaos is a ladder",
    103: "Are you coming, mylord",
    104: "Winter has come"
}

# Basic preprocessing function
def preprocess(text):
    # Remove punctuation, convert to lowercase, and split
    return text.replace(",", "").lower().split()

# Build inverted index
inverted_index = defaultdict(set)

for quote_id, text in quotes.items():
    words = preprocess(text)
    for word in words:
        inverted_index[word].add(quote_id)

# Convert sets to sorted lists for display
for term in inverted_index:
    inverted_index[term] = sorted(list(inverted_index[term]))

# Display the inverted index
print("{:<15}{}".format("Term", "Quote_IDs"))
print("-" * 30)
for term, ids in sorted(inverted_index.items()):
    print("{:<15}{}".format(term, ids))
```

Output:

```
[Running] python -u "e:\ADBS\exp13.py"
Term            Quote_IDs
------------------------------
a               [102]
are             [103]
chaos           [102]
come            [104]
coming          [101, 103]
has             [104]
is              [101, 102]
ladder          [102]
mylord          [103]
winter          [101, 104]
you             [103]
```

Conclusion: Students are able to implement Basic Inverted Index.