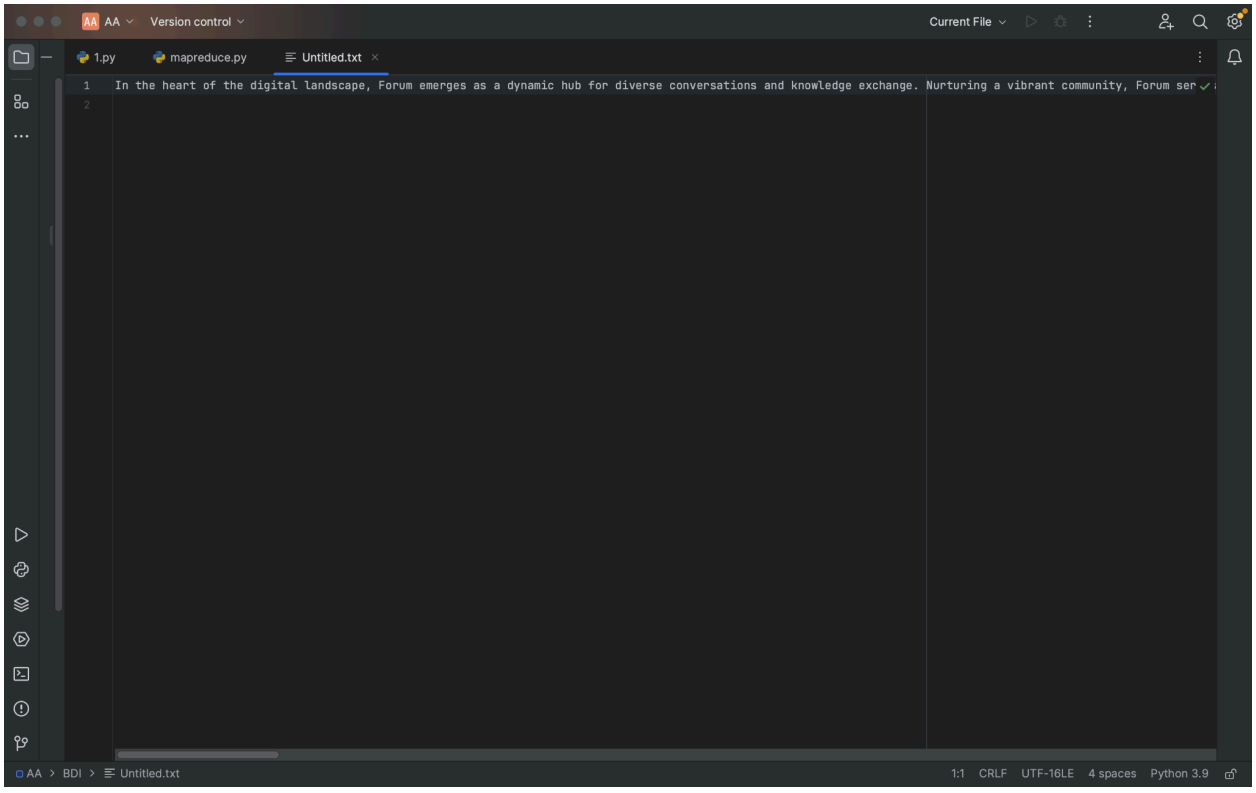
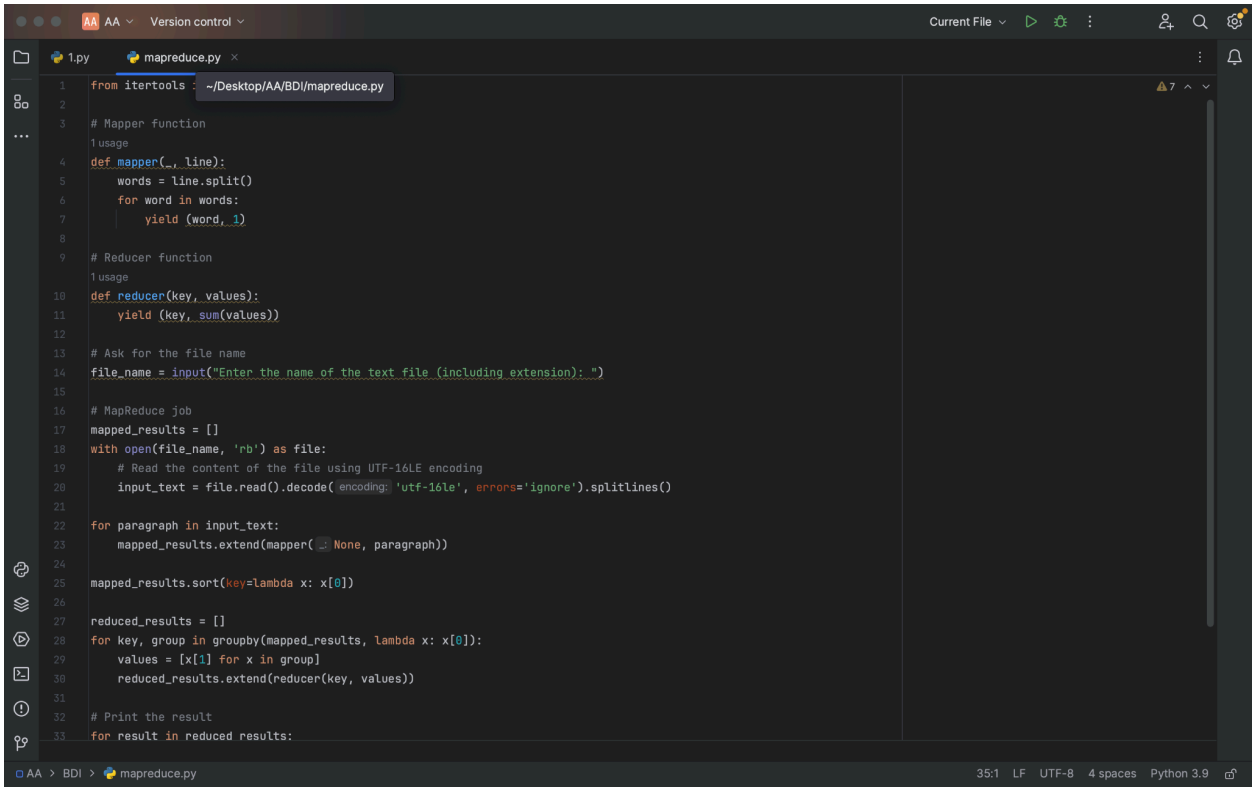
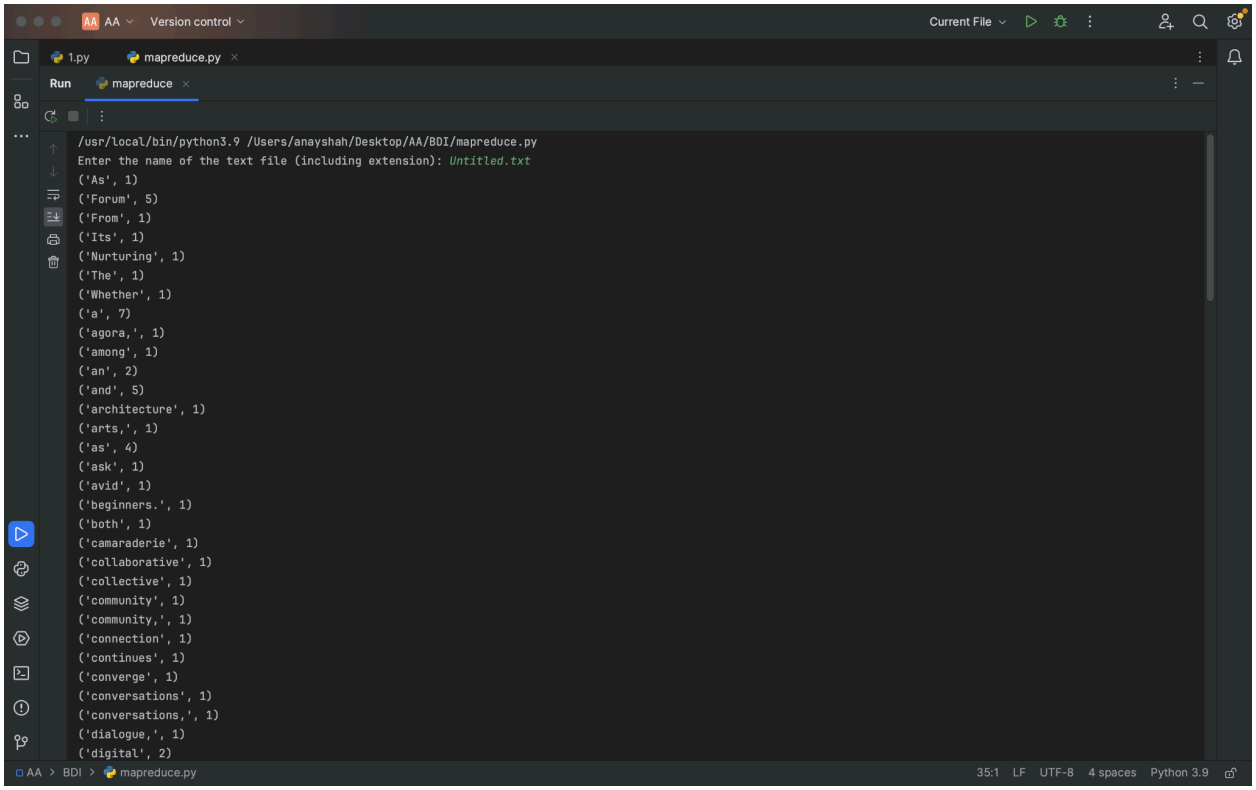
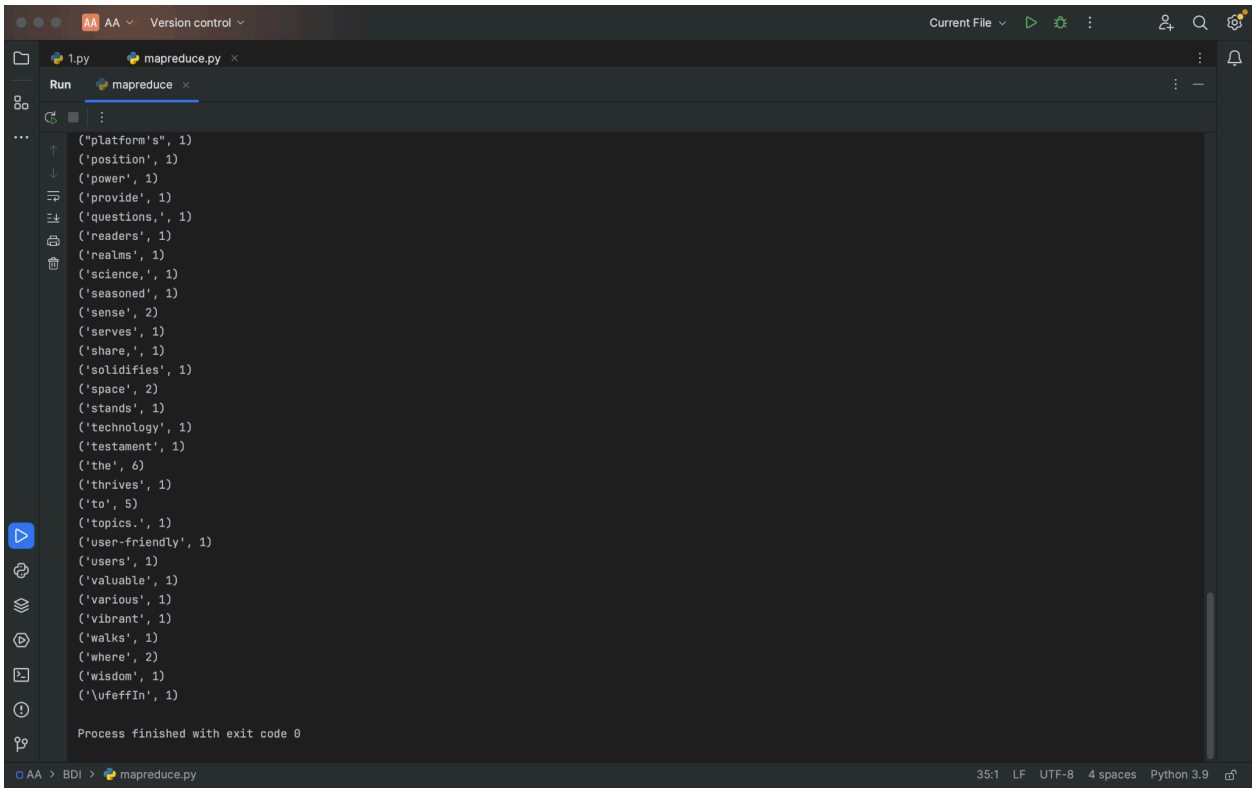
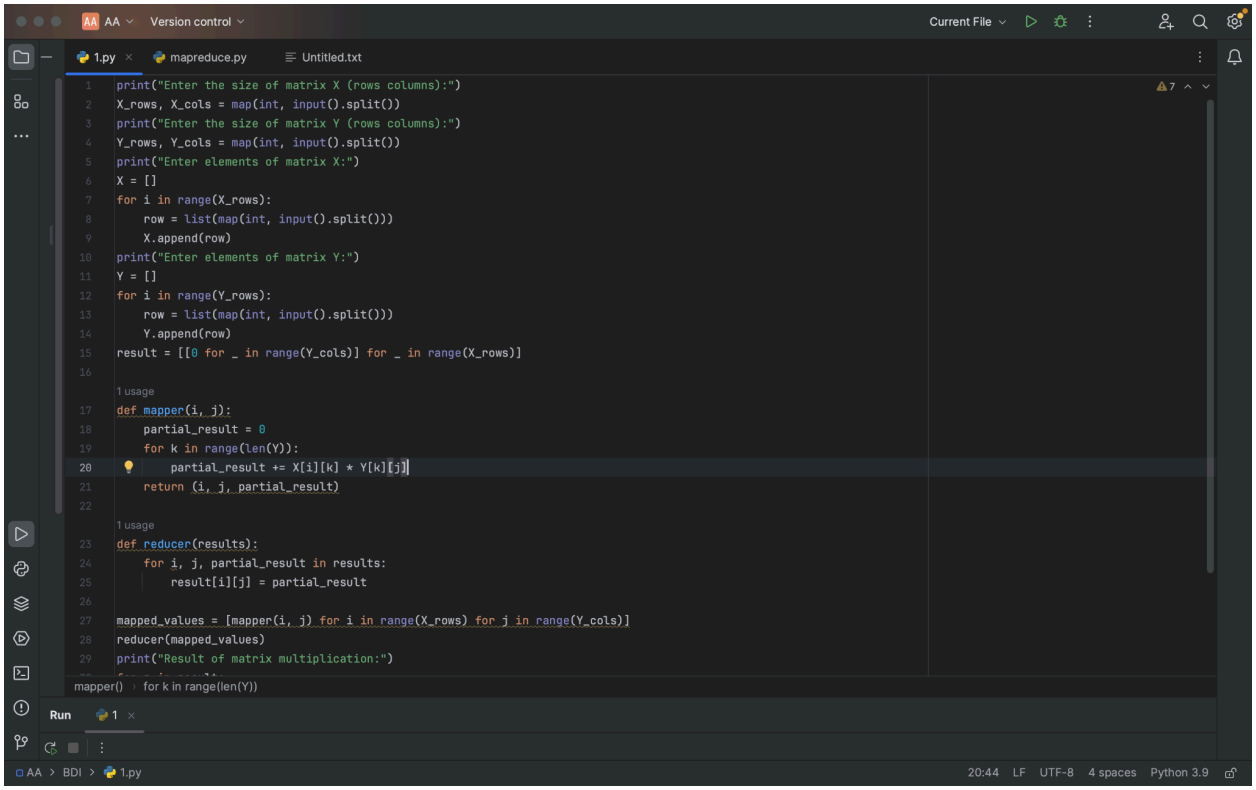
Output:


AA
Version control
Current File
1.py
mapreduce.py
Untitled.txt
In the heart of the digital landscape, Forum emerges as a dynamic hub for diverse conversations and knowledge exchange. Nurturing a vibrant community, Forum ser
AA > BDI > Untitled.txt
1:1 CRLF UTF-16LE 4 spaces Python 3.9


AA
Version control
Current File
1.py
mapreduce.py
~/Desktop/AA/BDI/mapreduce.py
from itertools
Mapper function
1 usage
def mapper(_, line):
words = line.split()
for word in words:
yield (word, 1)
Reducer function
1 usage
def reducer(key, values):
yield (key, sum(values))
# Ask for the file name
file_name = input("Enter the name of the text file (including extension): ")
# MapReduce job
mapped_results = []
with open(file_name, 'rb') as file:
# Read the content of the file using UTF-16LE encoding
input_text = file.read().decode(encoding: 'utf-16le', errors='ignore').splitlines()
for paragraph in input_text:
mapped_results.extend(mapper(_: None, paragraph))
mapped_results.sort(key=lambda x: x[0])
reduced_results = []
for key, group in groupby(mapped_results, lambda x: x[0]):
values = [x[1] for x in group]
reduced_results.extend(reducer(key, values))
# Print the result
for result in reduced_results:
AA > BDI > mapreduce.py
35:1 LF UTF-8 4 spaces Python 3.9


AA
Version control
Current File
1.py
mapreduce.py
Run
mapreduce
/usr/local/bin/python3.9 /Users/anayshah/Desktop/AA/BDI/mapreduce.py
Enter the name of the text file (including extension): Untitled.txt
('As', 1)
('Forum', 5)
('From', 1)
('Its', 1)
('Nurturing', 1)
('The', 1)
('Whether', 1)
('a', 7)
('agora,', 1)
('among', 1)
('an', 2)
('and', 5)
('architecture', 1)
('arts,', 1)
('as', 4)
('ask', 1)
('avid', 1)
('beginners.', 1)
('both', 1)
('camaraderie', 1)
('collaborative', 1)
('collective', 1)
('community', 1)
('community,', 1)
('connection', 1)
('continues', 1)
('converge', 1)
('conversations', 1)
('conversations,', 1)
('dialogue,', 1)
('digital', 2)
AA > BDI > mapreduce.py
35:1 LF UTF-8 4 spaces Python 3.9


AA
Version control
Current File
1.py
mapreduce.py
Run
mapreduce
("platform's", 1)
('position', 1)
('power', 1)
('provide', 1)
('questions,', 1)
('readers', 1)
('realms', 1)
('science,', 1)
('seasoned', 1)
('sense', 2)
('serves', 1)
('share,', 1)
('solidifies', 1)
('space', 2)
('stands', 1)
('technology', 1)
('testament', 1)
('the', 6)
('thrives', 1)
('to', 5)
('topics.', 1)
('user-friendly', 1)
('users', 1)
('valuable', 1)
('various', 1)
('vibrant', 1)
('walks', 1)
('where', 2)
('wisdom', 1)
('\ufeffIn', 1)
Process finished with exit code 0
AA > BDI > mapreduce.py
35:1 LF UTF-8 4 spaces Python 3.9

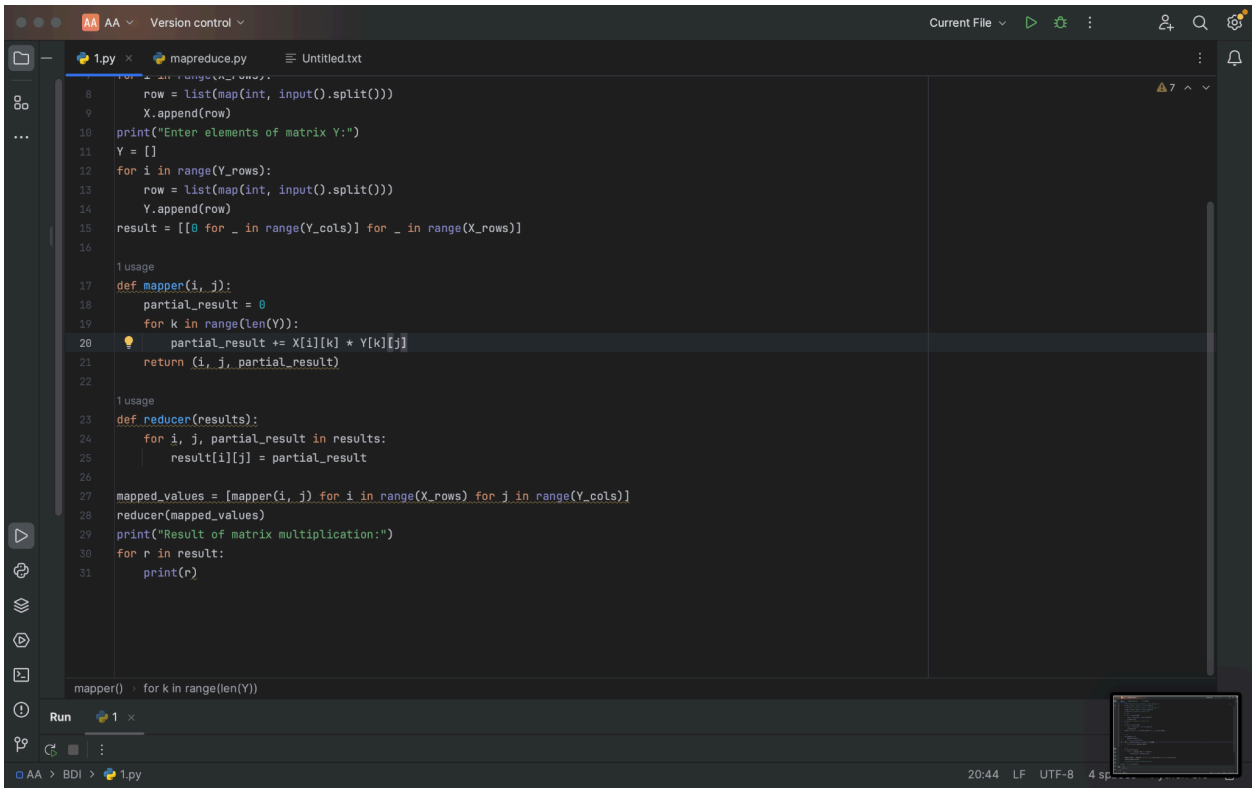


```
print("Enter the size of matrix X (rows columns):")
X_rows, X_cols = map(int, input().split())
print("Enter the size of matrix Y (rows columns):")
Y_rows, Y_cols = map(int, input().split())
print("Enter elements of matrix X:")
X = []
for i in range(X_rows):
    row = list(map(int, input().split()))
    X.append(row)
print("Enter elements of matrix Y:")
Y = []
for i in range(Y_rows):
    row = list(map(int, input().split()))
    Y.append(row)
result = [[0 for _ in range(Y_cols)] for _ in range(X_rows)]

1 usage
def mapper(i, j):
    partial_result = 0
    for k in range(len(Y)):
        partial_result += X[i][k] * Y[k][j]
    return (i, j, partial_result)

1 usage
def reducer(results):
    for i, j, partial_result in results:
        result[i][j] = partial_result

mapped_values = [mapper(i, j) for i in range(X_rows) for j in range(Y_cols)]
reducer(mapped_values)
print("Result of matrix multiplication:")
```

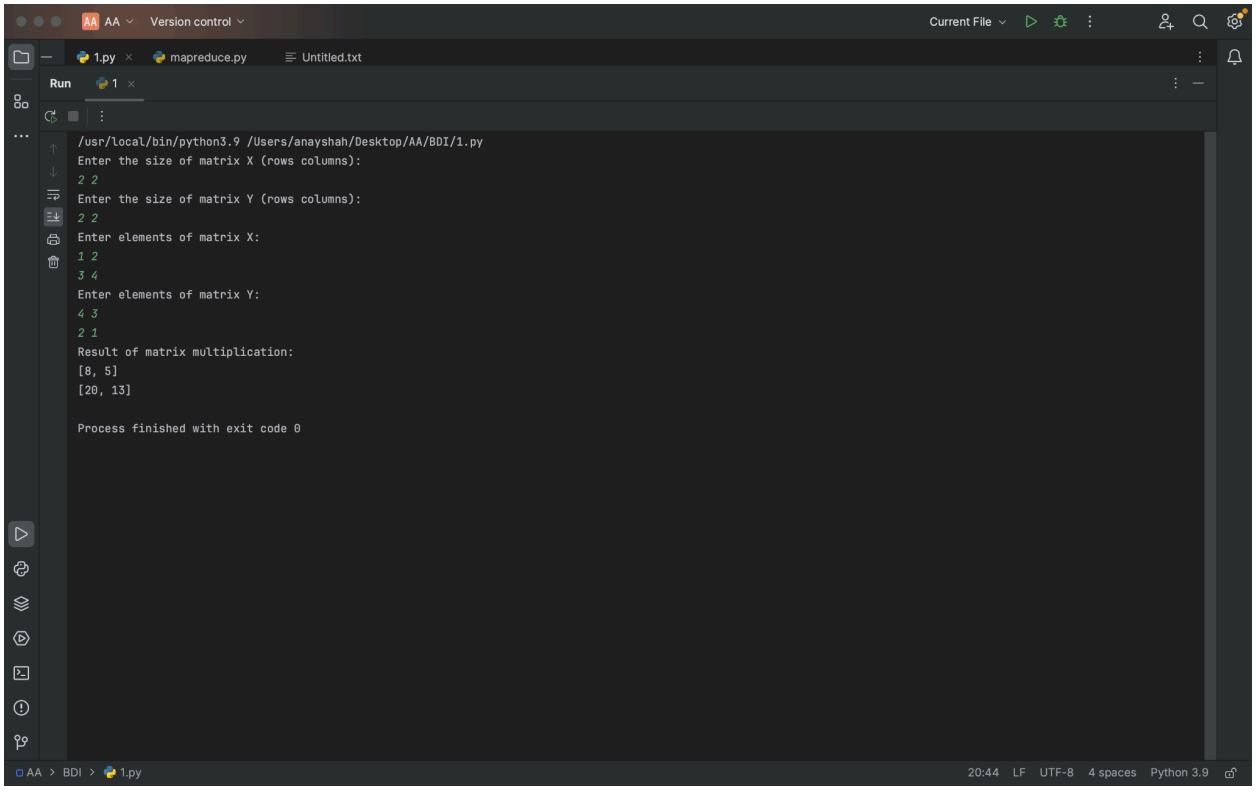


```
    row = list(map(int, input().split()))
    X.append(row)
print("Enter elements of matrix Y:")
Y = []
for i in range(Y_rows):
    row = list(map(int, input().split()))
    Y.append(row)
result = [[0 for _ in range(Y_cols)] for _ in range(X_rows)]

1 usage
def mapper(i, j):
    partial_result = 0
    for k in range(len(Y)):
        partial_result += X[i][k] * Y[k][j]
    return (i, j, partial_result)

1 usage
def reducer(results):
    for i, j, partial_result in results:
        result[i][j] = partial_result

mapped_values = [mapper(i, j) for i in range(X_rows) for j in range(Y_cols)]
reducer(mapped_values)
print("Result of matrix multiplication:")
for r in result:
    print(r)
```


AA
Version control
Current File
1.py
mapreduce.py
Untitled.txt
Run
1
/usr/local/bin/python3.9 /Users/anayshah/Desktop/AA/BDI/1.py
Enter the size of matrix X (rows columns):
2 2
Enter the size of matrix Y (rows columns):
2 2
Enter elements of matrix X:
1 2
3 4
Enter elements of matrix Y:
4 3
2 1
Result of matrix multiplication:
[8, 5]
[20, 13]
Process finished with exit code 0
AA > BDI > 1.py
20:44 LF UTF-8 4 spaces Python 3.9