Lab 1 (AP22110010984)

CSE 463 Data Warehousing and Mining

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Q1.

Code -

create_textfile_static.py

projects > create_textfile_static.py > ...

```python
# Program to create a text file with static transactions

# Open a file in write mode
with open("transactions.txt", "w") as file:
    # Write the static transactions to the file
    file.write("T1-A B C D\n")
    file.write("T2-B C D\n")
    file.write("T3-A B C\n")
    file.write("T4-B C E\n")
    file.write("T5-A C D\n")

print("File 'transactions.txt' created successfully.")

```

Output -

```
PS C:\college studies\Python\projects> python -u "c:\college studies\Python\projects\create_textfile_static.py"
File 'transactions.txt' created successfully.
PS C:\college studies\Python\projects>
```

Q2.

Code -

create_textfile_static.py | read_textfile.py

6th sem > DM&W > Labs > Codes > read_textfile.py > ...

```python
# Program to read and display the contents of 'transactions.txt'

try:
    # Open the file in read mode
    with open("transactions.txt", "r") as file:
        # Read and display the contents of the file
        content = file.read()
        print("Contents of 'transactions.txt':")
        print(content)
except FileNotFoundError:
    print("Error: The file 'transactions.txt' does not exist.")

```

Output -

```
PS C:\college studies\Python\projects> python -u "c:\college studies\Python\projects\create_textfile_static.py"
File 'transactions.txt' created successfully.
PS C:\college studies\Python\projects> python -u "c:\college studies\6th sem\DM&W\Labs\Codes\read_textfile.py"
Contents of 'transactions.txt':
T1-A B C D
T2-B C D
T3-A B C
T4-B C E
T5-A C D

PS C:\college studies\Python\projects>
```

Q3.

Code -

```python
# Program to dynamically create a text file and display its contents

# Function to create the file dynamically
def create_transaction_file():
    with open("transactions2.txt", "w") as file:
        while True:
            transaction_id = input("Enter transaction id (or 'stop' to finish): ")
            if transaction_id.lower() == 'stop':
                break

            num_items = int(input("Enter number of items purchased in transaction: "))
            items = []
            for _ in range(num_items):
                item = input("Enter the item: ")
                items.append(item)

            # Write transaction to file
            file.write(f"{transaction_id}-" + " ".join(items) + "\n")

# Function to read and display the file contents
def display_transaction_file():
    try:
        with open("transactions2.txt", "r") as file:
            content = file.read()
            print("Contents of 'transactions2.txt':")
            print(content)
    except FileNotFoundError:
        print("Error: The file 'transactions2.txt' does not exist.")

# Main logic
if __name__ == "__main__":
    create_transaction_file()
    display_transaction_file()
```

Output-

```
PS C:\college studies\Python\projects> python -u "c:\college studies\6th sem\DM&W\Labs\Codes\create_textfile_dynamic.py"
Enter transaction id (or 'stop' to finish): T1
Enter number of items purchased in transaction: 3
Enter the item: A
Enter the item: E
Enter the item: W
Enter transaction id (or 'stop' to finish): T2
Enter number of items purchased in transaction: 2
Enter the item: Q
Enter the item: W
Enter transaction id (or 'stop' to finish): T3
Enter number of items purchased in transaction: 5
Enter the item: V
Enter the item: B
Enter the item: H
Enter the item: K
Enter the item: J
Enter transaction id (or 'stop' to finish): stop
Contents of 'transactions2.txt':
T1-A E W
T2-Q W
T3-V B H K J
```

Q4.

Code-

```python
import random

# Program to generate 100 random integers in the range 1 to 50

def generate_random_numbers():
    random_numbers = [random.randint(1, 50) for _ in range(100)]
    print("100 Random Numbers between 1 and 50:")
    print(random_numbers)

if __name__ == "__main__":
    generate_random_numbers()
```

Output-

```
100 Random Numbers between 1 and 50:
[38, 46, 23, 22, 17, 23, 29, 24, 17, 38, 6, 6, 46, 9, 50, 34, 5, 44, 20, 13, 33, 10, 41, 27, 13, 25, 30, 30, 42, 39, 28, 18, 50, 34, 49, 42, 4, 36, 23, 2, 48, 44, 22,
12, 10, 42, 20, 14, 13, 13, 45, 1, 26, 23, 36, 41, 25, 10, 35, 3, 19, 24, 40, 32, 7, 40, 36, 50, 40, 24, 28, 34, 26, 20, 16, 25, 9, 23, 28, 25, 42, 47, 18, 50, 19, 6,
48, 42, 25, 7, 40, 37, 25, 41, 34, 5, 7, 12, 47, 45]
PS C:\college studies\6th sem>
```

Q5.

Code -

```python
import random
import string

# Function to generate a random transaction ID
def generate_transaction_id():
    return ''.join(random.choices(string.ascii_uppercase + string.digits, k=6))

# Function to generate random items
def generate_items():
    items = ["A", "B", "C", "D", "E", "F", "G", "H", "I", "J"]
    return random.sample(items, k=random.randint(3, len(items)))

# Function to create the transactions file
def create_large_transaction_file():
    with open("transactions3.txt", "w") as file:
        for _ in range(10000):
            transaction_id = generate_transaction_id()
            items = generate_items()
            file.write(f"{transaction_id}-" + " ".join(items) + "\n")

    print("File 'transactions3.txt' with 10,000 transactions created successfully.")

if __name__ == "__main__":
    create_large_transaction_file()

```

Output-

```
File 'transactions3.txt' with 10,000 transactions created successfully.
PS C:\college studies\6th sem>
```

Q5. Experiment text document video -

transaction 3 vid (L1-Q5).mp4