Name: - Shivraj Khadepatil

Roll no:- A 60

Code:-

```
import csv
import datetime
import os
volatile_data = []
recovery_image = []
def back():
  # goo to back to the menu
  con = input("Back to Main Menu ? Y/N :")
  if con == "Y" or con == "y":
    main_menu()
  elif con == "N" or con == "n":
    w = input("Warning your recovery data may loss, Are confirm to exit? Y/n :")
    if w == "Y" or w == "y":
      exit(0)
    elif w == "N" or w == "n":
      back()
    else:
      print("Invalid Statements ....")
  else:
    print("Invalid Statements ....")
    back()
def load_data():
  # Load Data into Volatile memory so easy to work on the file.
  get_temp_data = []
  with open("User_data.csv", "r", newline="') as file:
    read = csv.DictReader(file)
    # Load the data into List
    for row in read:
      get_temp_data.append(row)
  return get_temp_data
```

```
# Main Memory Loader
if os.path.exists('User_data.csv'):
  volatile_data = load_data()
def update_date():
  get = input("Enter the card Number: ")
  update_data, i = search_data(get)
  volatile_data.remove(update_data)
  print("Which Part do you want to update?")
  print("\n1: Card Number \n2: Name\n3: Age\n4: NRIC\n5: Amount (RM)")
  memory = {"1": "Card Number", "2": "Name", "3": "Age ", "4": "NRIC", "5": "Amount (RM)"}
  k = input()
  for mem, val in memory.items():
    if k == mem:
      update_data[val] = input("Enter the new " + val + " : ")
      break
  volatile_data.insert(i, update_data)
  with open("User_data.csv", "w", newline=") as file:
    csv_writer = csv.DictWriter(file, fieldnames=["Card Number", "Name", "Age", "NRIC", "Amount
(RM)", "Registered Date"])
    file.seek(0, 2)
    if file.tell() == 0:
      csv_writer.writeheader() # Write only Once
    csv writer.writerows(volatile data)
  back()
def delete_data():
  danger = input("1: Remove All \n2: Remove specific data")
  recovery image = volatile data
  if danger == "1":
    confirm = input("Danger, Are confirm to delete? Y/N")
    if confirm == "Y" or confirm == "y":
      os.remove("User data.csv")
      print("Data successfully erased! \n But you still can do back up")
      back()
```

```
elif confirm == "N" or confirm == "n":
      exit(0)
  elif danger == "2":
    select = input("Please enter the card number")
    delete_data, i = search_data(select)
    confirm = input("Danger, Are confirm to delete? Y/n")
    if confirm == "Y" or confirm == "y":
      recovery image = volatile data
      volatile data.remove(delete data)
      with open("User_data.csv", "w", newline=") as file:
        csv writer = csv.DictWriter(file, fieldnames=["Card Number", "Name", "Age", "NRIC",
"Amount (RM)", "Registered Date"])
        file.seek(0, 2)
        if file.tell() == 0:
           csv writer.writeheader() # Write only Once
        csv_writer.writerows(volatile_data)
        back()
def search_data(card_no):
  i = 0
  for data in volatile_data:
    if data["Card Number"] == card_no:
      return data, i
    i += 1
  print("Card number: " + card_no + " data not exist!")
  back()
def recovery_data():
  print("Data in system memory")
  for data in recovery_image:
    print(recovery_image)
  rec = input("Do you want to recover? Y/n")
  if rec == "Y" or rec == "y":
    with open("User_data.csv", "w", newline=") as file:
      csv_writer = csv.DictWriter(file, fieldnames=["Card Number", "Name", "Age", "NRIC", "Amount
(RM)", "Registered Date"])
```

```
file.seek(0, 2)
      if file.tell() == 0:
        csv_writer.writeheader() # Write only Once
      csv_writer.writerows(recovery_image)
    back()
def view_data():
  # View Loaded Data
  for data in volatile data:
    print(data)
    back()
def create_data():
  temp_data = {}
  unique = input("Enter Card Number: ")
  name = input("Enter Name : ")
  age = input("Enter Age : ")
  id = input("Enter NRIC : ")
  cash = float(input("Enter Deposit RM:"))
  temp_data["Card Number"] = unique
  temp_data["Name"] = name
  temp_data["Age"] = age
  temp_data["NRIC"] = id
  temp_data["Amount (RM)"] = cash
  x = datetime.datetime.now()
  temp_data["Registered Date"] = x.strftime("%d-%m-%Y")
  print("Saving Data...")
  with open("User_data.csv", "a", newline=") as file:
    csv_writer = csv.DictWriter(file,fieldnames=["Card Number", "Name", "Age", "NRIC", "Amount
(RM)", "Registered Date"])
    file.seek(0, 2)
    if file.tell() == 0:
      csv_writer.writeheader() # Write only Once
    csv_writer.writerow(temp_data)
  back()
```

```
def main_menu():
  print(
    "Welcome to Main menu \n 1: Enter Data \n 2: Update Data \n 3: Delete Data \n 4: View Data \n
5: Recover Data")
  opt = input("Please Choose the option : ");
  if opt == "1":
    create_data()
    volatile_data = load_data()
  elif opt == "2":
    update_date()
    volatile_data = load_data()
  elif opt == "3":
    delete_data()
  elif opt == "4":
    view_data()
  elif opt == "5":
    recovery_data()
main_menu()
```

Output:-

```
Welcome to Main menu

1: Enter Data

2: Update Data

3: Delete Data

4: View Data

5: Recover Data

Please Choose the option: 1

Enter Card Number: 2307

Enter Name: Prem Ubhe

Enter Age: 20

Enter NRIC: 222220

Enter Deposit RM: 230111

Saving Data...
```

Back to Main Menu? Y/N:y Welcome to Main menu 1: Enter Data 2: Update Data 3: Delete Data 4: View Data 5: Recover Data Please Choose the option: 2 Enter the card Number: 2307 Card number: 2307 data not exist! Back to Main Menu? Y/N:y Welcome to Main menu 1: Enter Data 2: Update Data 3: Delete Data 4: View Data 5: Recover Data Please Choose the option: 3 1: Remove All 2: Remove specific data1 Danger, Are confirm to delete? Y/Ny Data successfully erased! But you still can do back up Back to Main Menu? Y/N:y Welcome to Main menu 1: Enter Data 2: Update Data 3: Delete Data 4: View Data 5: Recover Data

{'Card Number': '1', 'Name': 'user', 'Age': '23', 'NRIC': '231', 'Amount (RM)': '20000.0', 'Registered

Please Choose the option: 4

Date': '19-05-2020'}

Back to Main Menu? Y/N:y

Welcome to Main menu

- 1: Enter Data
- 2: Update Data
- 3: Delete Data
- 4: View Data
- 5: Recover Data

Please Choose the option: 5

Data in system memory

Do you want to recover? Y/ny

Back to Main Menu? Y/N:n

Warning your recovery data may loss, Are confirm to exit? Y/n:y

Process finished with exit code 0