Assignment 1- B : Passport Database - Shell Programming

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```bash
#!/bin/bash
createDatabase() {
  if [ ! -e "text.txt" ]; then
    touch "text.txt"
    echo "| ID | Name | Email | Phone Number |" > "text.txt"
    echo "Database created successfully."
  else
    echo "Database already exists."
  fi
}

showDatabase() {
  if [ ! -e "text.txt" ]; then
    echo "Database is not created"
    return
  fi

  if [ -s "text.txt" ]; then
    tail -n +2 "text.txt" | sort -n  # Sort database excluding header, numerically by ID
  else
    echo "Database is empty"
  fi
}

insertRecord() {
  if [ ! -e "text.txt" ]; then
    echo "Database is not created"
    return
  fi

  read -p "Enter Name: " name
  read -p "Enter Email: " email
  read -p "Enter Phone Number: " phone

  # Validate email format
  if ! [[ $email =~ ^[A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,}$ ]]; then
    echo "Invalid email format. Record not inserted."
    return
  fi

  # Validate phone number format (exactly 10 digits)
  if ! [[ $phone =~ ^[0-9]{10}$ ]]; then
    echo "Invalid phone number format. Record not inserted."
    return
  fi

  # Generate ID: Count lines in database and add 1
  local id=$(($(wc -l < "text.txt") + 1))

  echo "| $id | $name | $email | $phone |" >> "text.txt"
  echo "Record inserted successfully."
}
```

```bash
deleteRecord() {
    if [ ! -e "text.txt" ]; then
        echo "Database is not created"
        return
    fi

    read -p "Enter ID of the record to delete: " id

    if ! grep -q "| $id |" "text.txt"; then
        echo "Record with ID $id Not Found"
    else
        sed -i "/| $id |/Id" "text.txt"
        echo "Record with ID $id deleted successfully."
    fi
}

searchRecord() {
    if [ ! -e "text.txt" ]; then
        echo "Database is not created"
        return
    fi

    read -p "Enter ID or Name to search: " query

    if grep -q "| $query |" "text.txt"; then
        grep "| $query |" "text.txt"
    else
        echo "Record Not Found"
    fi
}

updateRecord() {
    if [ ! -e "text.txt" ]; then
        echo "Database is not created"
        return
    fi

    read -p "Enter ID of the record to update: " id

    if ! grep -q "| $id |" "text.txt"; then
        echo "Record with ID $id Not Found"
        return
    fi

    echo "Select field to update:"
    echo "1. Name"
    echo "2. Email"
    echo "3. Phone Number"
    read -p "Enter choice: " field_choice

    case $field_choice in
        1)
            read -p "Enter new Name: " name
            sed -i "/| $id |/s/|[^|]*|/| $id | $name |/" "text.txt"
            echo "Name updated successfully." ;;
        2)
            read -p "Enter new Email: " email
```

```bash
            # Validate email format
            if ! [[ $email =~ ^[A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,}$ ]]; then
                echo "Invalid email format. Email not updated."
                return
            fi

            sed -i "/| $id |/s/|[^|]*|/| $id | $(echo $email | xargs) |/" "text.txt"
            echo "Email updated successfully." ;;
        3)
            read -p "Enter new Phone Number: " phone

            # Validate phone number format (exactly 10 digits)
            if ! [[ $phone =~ ^[0-9]{10}$ ]]; then
                echo "Invalid phone number format. Phone Number not updated."
                return
            fi

            sed -i "/| $id |/s/|[^|]*|/| $id | $(echo $phone | xargs) |/" "text.txt"
            echo "Phone Number updated successfully." ;;
        *)
            echo "Invalid Choice"
    esac
}

    echo -e "<----------\nWelcome to the Appointment for Passport\n---------->"
    while true; do
        echo "1. Create Database"
        echo "2. Show Database"
        echo "3. Insert Record"
        echo "4. Delete Record"
        echo "5. Search Record"
        echo "6. Update Record"
        echo -e "7. Exit\n"

        read -p "Enter Choice: " choice

        case $choice in
            1) createDatabase ;;
            2) showDatabase ;;
            3) insertRecord ;;
            4) deleteRecord ;;
            5) searchRecord ;;
            6) updateRecord ;;
            7) exit ;;
            *) echo "Invalid Choice" ;;
        esac
    done
```

OUTPUT OF CODE:


```
sakshi711@sakshi711:~/33229$ ./assi1b.sh
bash: ./assi1b.sh: Permission denied
sakshi711@sakshi711:~/33229$ chmod +x assi1b.sh
sakshi711@sakshi711:~/33229$ ./assi1b.sh
<----------
Welcome to the Appointment for Passport
---------->
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 1
Database created successfully.
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 3
Enter Name: Abc
Enter Email: sadjfh
Enter Phone Number: 5467
Invalid email format. Record not inserted.
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 3
Enter Name: abc
```



```
Enter Choice: 3
Enter Name: Abc
Enter Email: sadjfh
Enter Phone Number: 5467
Invalid email format. Record not inserted.
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 3
Enter Name: abc
Enter Email: abc@gmail.com
Enter Phone Number: 9846247483
Record inserted successfully.
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 2
| 2 | abc | abc@gmail.com | 9846247483 |
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 5
Enter ID or Name to search: 2
| 2 | abc | abc@gmail.com | 9846247483 |
```

```
Enter Choice: 2
| 2 | abc | abc@gmail.com | 9846247483 |
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 6
Enter ID of the record to update: 2
Select field to update:
1. Name
2. Email
3. Phone Number
Enter choice: 2
Enter new Email: bvc@gmail.com
Email updated successfully.
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 2
| 2 | bvc@gmail.com | abc | abc@gmail.com | 9846247483 |
1. Create Database
2. Show Database
3. Insert Record
4. Delete Record
5. Search Record
6. Update Record
7. Exit

Enter Choice: 7
sakshi711@sakshi711:~/33229$
```