Data Structures and Algorithms

In class Lab 09

Index-210670N

Github Repo link- https://github.com/OmalyaV/In-class-lab

Section 1

Task 1

```
Type command:1
 Enter user name:Vidushini.A.O
 Enter password to be saved:210670N
 Type command:4
 [0]-->
[1]-->
[2]-->
[3]-->210670N
```

Task2

Task 3

```
[3]-->210670N
Type command:2
 Enter item to be deleted:Vidushini.A.O
 User deleted
Type command: Type command:4
 [0]-->ushari2001
[1]-->Annisclever
[2]-->niduka21
[3]-->
Type command:
```

- With this kind of simple hash table the collisions are not managed, therefore, when the hash function generates the same hash codes for two passwords the second password cannot be stored in the hash table.

To prevent this, we need to use techniques like chaining, linear probing or quadratic probing to manage collisions and store even the colliding data in the hash table.

Section 2

Task 1

```
 0
 Type command:1
  Enter user name:Vidushini.A.O
  Enter password to be saved:210670N
  Type command:1
  Enter user name:Vidushini.A.O
  Enter password to be saved:210670N
  Ty
pe command:3
  [0]-->[]
[1]-->[]
[2]-->[]
[3]-->[Vidushini.A.O, Vidushini.A.O, ]
 Type command:
```

Task 2

```
Type command:1
 Enter user name:Ushari
 Enter password to be saved:ushari210
 Type command:1
 Enter user name:Sonali
 Enter password to be saved:Niduka21
 Ty
pe command:1
 Enter user name:Devindi
 Enter password to be saved:Tikri21
 Linked List reached MAX CAP!
Type command:1
 Enter user name:MAlka
 Enter password to be saved:mal21
 Type command:3
 [0]-->[Ushari, ]
[1]-->[]
[2]-->[Sonali, MAlka, ]
[3]-->[Vidushini.A.O, Vidushini.A.O, ]
 Type command:
```