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CS2023 - Inclass Lab
Week 9 - Hash tables

Lab09 Repository link:
Repository link for all labs:

Section 1

2. Insert your name as user name and your index number as password. Print hash table and take screenshot.

```
PS C:\Users\2001l> cd "d:\Academics Sem 2\Data Str
0
Type command: 1
Enter user name: Lasana
Enter password to be saved: 210620M
Type command: 4
[0]-->210620M
[1]-->
[2]-->
[3]-->
Type command: ▏
```

3. Add 3 more user names and passwords. Print hash table and take screenshot.

```
PS D:\Academics Sem 2\Data Structures and Algorithms\210620M_DSA labs\Week 9>
0
Type command: 1
Enter user name: Lasana
Enter password to be saved: 210620M
Type command: 1
Enter user name: Sadeesha
Enter password to be saved: 210517T
Type command: 1
Enter user name: Navoda
Enter password to be saved: 210714F
Type command: 1
Enter user name: Nadun
Enter password to be saved: 210507L
Collision Occured. Resolution required!!!Type command: 4
[0]-->210620M
[1]-->210714F
[2]-->210517T
[3]-->
Type command: ▏
```

4. Delete your user name. Print hash table and take screenshot.

```
Type command: 2
Enter item to be deleted: Lasana
User deleted
Type command: 4
[0]-->
[1]-->210714F
[2]-->210517T
[3]-->
Type command: ▌
```

5. What is issue when using a simple hash table like this and how can we change it, explain your answer.

In this type of basic Hash table more than one entry with the same hash value cannot be stored. We can resolve this by assigning linked lists for the consecutive hash indexes where more than one values with the same hash value can be saved.
Open addressing is also another method.

Section 2

2. Insert your name as user name and your index number as password(do it two times). Print hash table and take screenshot.

```
PS D:\Academics Sem 2\Data Structures and
haining }
0
Type command: 1
Enter user name: Lasana
Enter password to be saved: 210620M
Type command: 1
Enter user name: Lasana
Enter password to be saved: 210620M
Type command: 3
[0]-->[Lasana, Lasana, ]
[1]-->[]
[2]-->[]
[3]-->[]
Type command: ▌
```

3. Add 3 more user names and passwords. Print hash table and take screenshot.

```
Enter password to be saved: 210620M
Type command: 3
[0]-->[Lasana, Lasana, ]
[1]-->[]
[2]-->[]
[3]-->[]
Type command: 1
Enter user name: Nadun
Enter password to be saved: 210507L
Type command: 1
Enter user name: Sadeesha
Enter password to be saved: 210514T
Type command: 1
Enter user name: Navoda
Enter password to be saved: 210714F
Type command: 3
[0]-->[Lasana, Lasana, ]
[1]-->[Navoda, ]
[2]-->[Nadun, Sadeesha, ]
[3]-->[]
Type command:
```