

Name: Md. Sabbir Rahman

ID: 11705076

Course: CSE 208

Offline 8

Report:

In this offline, 3 types of hashtables were used: chaining based, double hashing and custom probing. They were used with two hashing functions. They are :

```
int hash1(string &str, int n){  
    long long int h = 0;  
    for(int c : str){  
        h = ((h*102000890) + c)%1000000007;  
    }  
    double tmp;  
    return int(n * modf(h*0.618033, &tmp));  
}
```

```
int hash2(string &str, int n){  
    long long int h = 0;  
    for(int c : str){  
        h = ((h^102000890)*c)%1000000007;  
    }  
    double tmp;  
    return int(n * modf(h*0.618033, &tmp));  
}
```

Data:

	Hash1		Hash2	
	Collisions	Average Probe Count	Collisions	Average Probe Count
Chaining	3706	1.487	3678	1.492
Double Hashing	79493	7.585	86050	16.061
Custom Probing	73881	9.381	64200	5.919