Data Structure Quiz 7

Total Marks 18

	9 ml - 1 - 1		
Name: _	Solution	Roll No	

Question: Suppose you are designing a hash table to store a set of records, each containing a unique identifier (ID) and associated data.

The hash function is defined as $H_1(ID) = ID \% 11$, keys = 42, 16, 91, 33, 18, 27, 36, 62

Identify the size of hash table. = 11

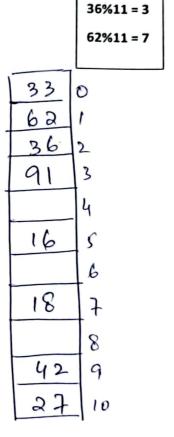
If collision happen, resolve it with the help of

- 1. Quadratic Probing: h'(ID) = (h(ID) + i2) % 11
- 2. Double hashing: $h_2(ID) = 8 (ID \% 8)$ $h'(ID) = (h_2(ID) + i * h_1(ID)) \% 11$

What are the advantages of Double Hashing over Quadratic Probing?

What	are the	advant
Ovadratic	Prof	ping
427.11=9	33	0
16/11=5		1
91/11 = 3		2
33/11=0	91	3
27111=5	36	4
	16	6
h'= 5+12/11	2+	7
= 6	62	8
361/11=3	42	9
h'= 3+12/.1	1	10
(= 4)		
62/11=7		
h'= 7+12/	.11	

f Double Hashing over Quadratic Probing?		
Double Hashing		
27-1.11= 5		
$h_a = 8 - (a71.8)$		
= 8-3=5		
h'= S+ 1*5 1.11		
= 10		
367.11= 3		
$h_2 = 8 - (367.8) = 8 - 4 = 4$		
h'= 4+1+3 1.11 = 7		
h'= 4+ 2 *3 1.11 = 10		
h'= 4+3+3% W= 2		
62% 11=7		
ha = 8-(627.8)= 8-6=2		
h'= 2+1 *7 1/11 = 9		
h'= 2+2*711=5		
h'= 2+3*7-(=1)		



Help:

42%11 = 9

16%11 = 5

91%11 = 3

33%11 = 0

18%11 = 7

27%11 = 5