

COSC 222 – LAB 8

QUESTION 1

A) Linear Probing (I, i+1, i+2, i+3, ...)

Add 17:

Index	0	1	2	3	4	5	6
Values				17			

Add 25:

Index	0	1	2	3	4	5	6
Values				17	25		

Add 11 (Collision with 25):

Index	0	1	2	3	4	5	6
Values				17	25	11	

Add 46 (Collision with 25 then with 11):

Index	0	1	2	3	4	5	6
Values				17	25	11	46

Add 14:

Index	0	1	2	3	4	5	6
Values	14			17	25	11	46

B) Quadratic Probing ($i, i+1^2, i+2^2, i+3^2, \dots$)

Add 17:

Index	0	1	2	3	4	5	6
Values				17			

Add 25:

Index	0	1	2	3	4	5	6
Values				17	25		

Add 11 (Collision with 25):

Index	0	1	2	3	4	5	6
Values				17	25	11	

Add 46 (Collision with 25 then with 11):

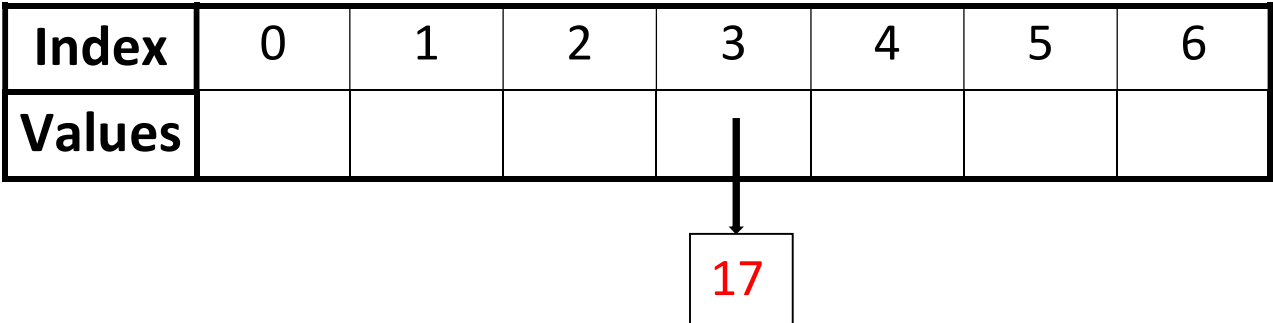
Index	0	1	2	3	4	5	6
Values			46	17	25	11	

Add 14:

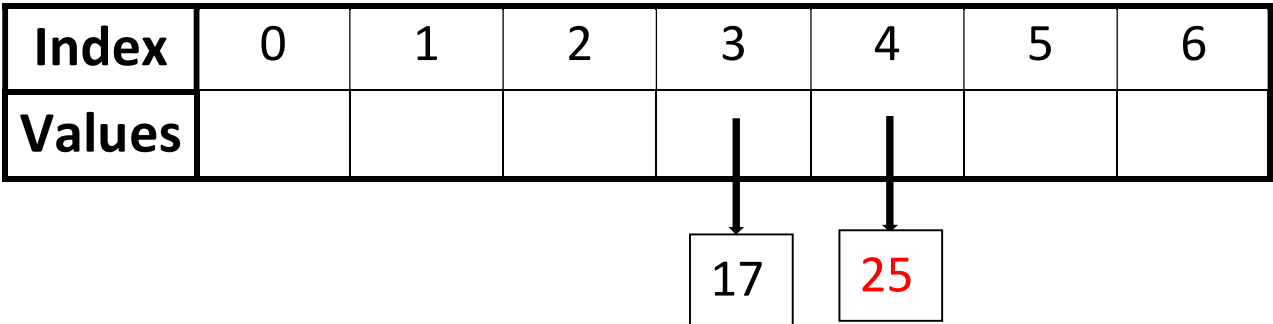
Index	0	1	2	3	4	5	6
Values	14		46	17	25	11	

C) Separate Chaining (storing a list at each index)

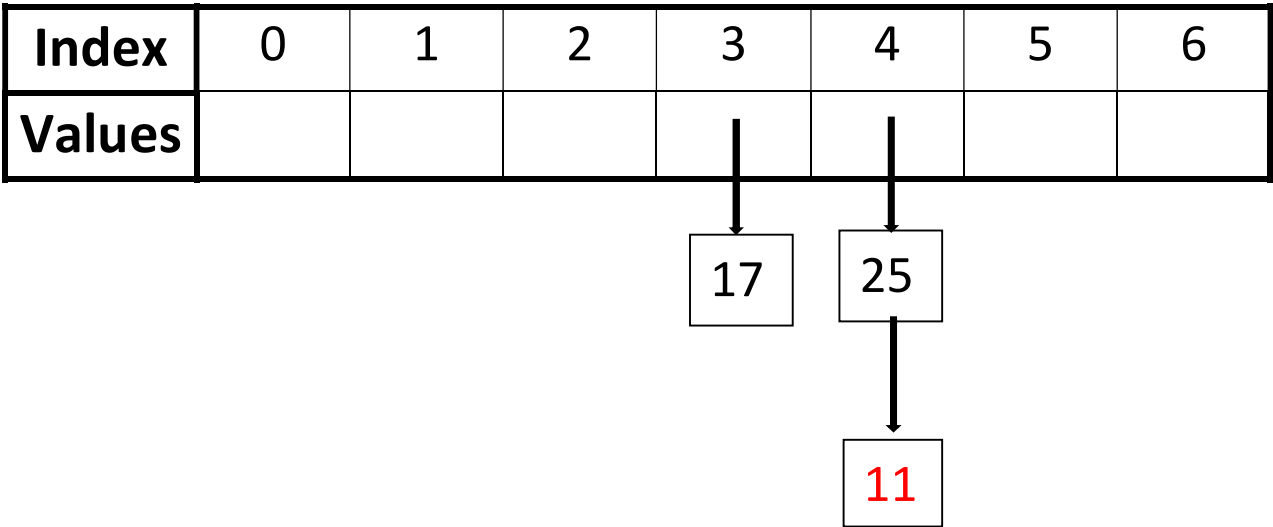
Add 17:



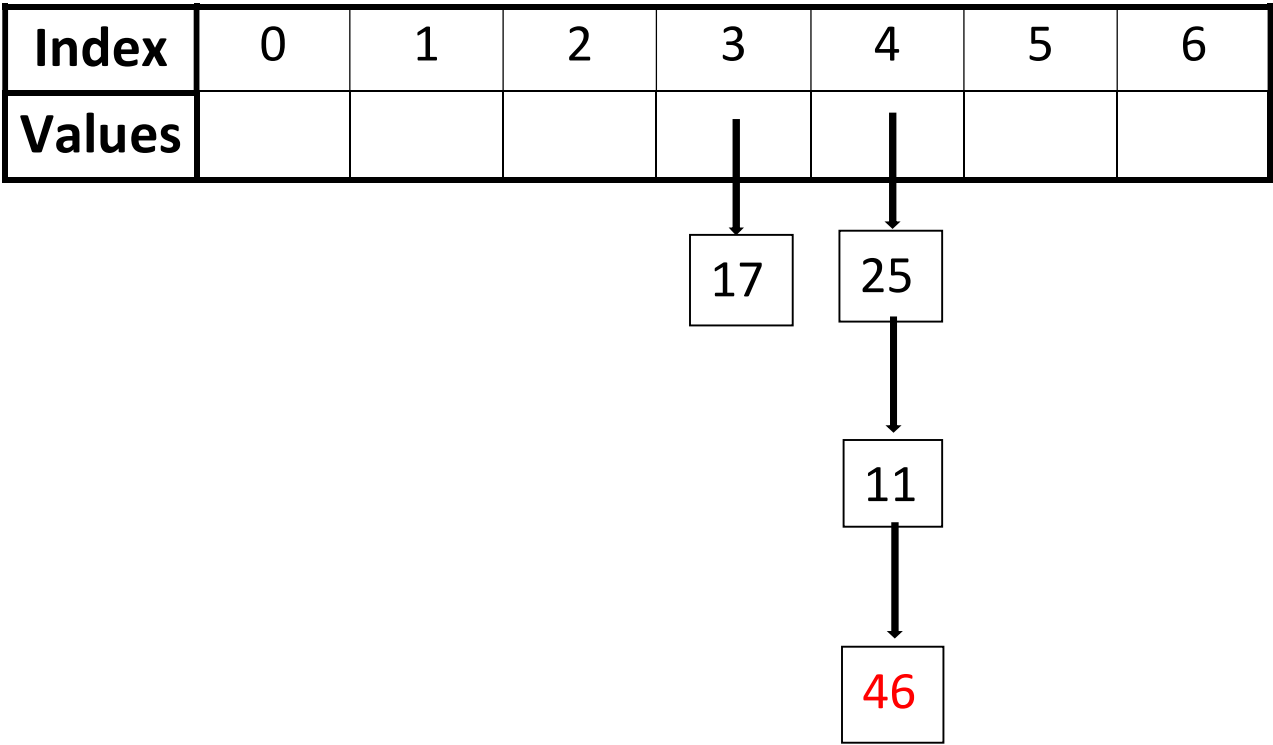
Add 25:



Add 11:



Add 46:



Add 14:

