

Ömer Mesud TOKER
21302479
Section 1

HW 4

QUESTION 1)

A) FOR AVL

INSERTION

23

23

36

36

23 52

36

23 52

45

36

23 52

45 61

52

36 61

23 45 78

52

36 61

23 45 57 78

52

36 61

23 45 57 78

29

DELETION

52

29 61

23 36 57 78

52

29 61

23 36 78

$$\begin{array}{ccccc} & & 52 & & \\ & 29 & & 78 & \\ 23 & & 36 & & \end{array}$$

B) FOR 2-3

INSERTION

23

23-36

$$\begin{array}{ccccc} & & 36 & & \\ 23 & & 52 & & \end{array}$$

$$\begin{array}{ccccc} & & 36 & & \\ 23 & & 45-52 & & \end{array}$$

$$\begin{array}{ccccc} & & 36 - 52 & & \\ 23 & & 45 & 61 & \end{array}$$

$$\begin{array}{ccccc} & & 36 - 52 & & \\ 23 & & 45 & 61-78 & \end{array}$$

$$\begin{array}{ccccc} & & 52 & & \\ & 36 & & 61 & \\ 20 & 45 & 57 & 78 & \end{array}$$

$$\begin{array}{ccccc} & & 52 & & \\ & 36 & & 61 & \\ 20-29 & 45 & 57 & 78 & \end{array}$$

DELETION

$$\begin{array}{ccccc} & & 52 & & \\ & 36 & & 61 & \\ 20-29 & 45 & 57 & 78 & \end{array}$$

$$\begin{array}{ccccc} & & 52 & & \\ & 29 & & 61 & \\ 20 & 36 & 57 & 78 & \end{array}$$

$$\begin{array}{ccccc} & & 29 - 52 & & \\ 20 & & 36 & 61-78 & \end{array}$$

29 - 52
20 36 78

C) 2-3-4

23

23-36

23-36-52

36
23 45-52

36
23 45-52-61

36 - 52
23 45 61-78

36 - 52
23 45 57-61-78

36 - 52
23-29 45 57-61-78

DELETION

36 - 52
23-29 45 57-61-78

29 - 52
23 36 57-61-78

29 - 52
23 36 61-78

29 - 52
23 36 78

QUESTION 2)

Linear Probing

1.	13
2.	25
3.	15
4.	28
5.	24
6.	-
7.	-
8.	-
9.	9
10.	-
11.	11
12.	12

Quadratic Probing

1.	13
2.	25
3.	28
4.	-
5.	-
6.	-
7.	24
8.	25
9.	9
10.	-
11.	11
12.	12

Seperate Chaining

1.	13
2.	-
3.	15 28
4.	-
5.	-
6.	-
7.	-
8.	-
9.	9
10.	-
11.	11 24
12.	12 25