

## Ayman\_Gamal

```
1
2      Choose one of the following
3 options
4 1: Add student
5 2: Delete student
6 3: View students
7 4: Delete All
8 5: get node information
9 6: Number of nodes
10 7: get node information form end of
11 list
12 8: get middle nodes of list
13 Enter option Number : 8
14
15
16 =====
17 =====
18 it is empty list ====
19      Choose one of the following
20 options
21 1: Add student
22 2: Delete student
23 3: View students
24 4: Delete All
25 5: get node information
26 6: Number of nodes
27 7: get node information form end of
28 list
29 8: get middle nodes of list
30 Enter option Number : 7
31
32
33 =====
34 =====
35 it is empty list ====
36      Choose one of the following
37 options
38 1: Add student
39 2: Delete student
40 3: View students
41 4: Delete All
42 5: get node information
43 6: Number of nodes
44 7: get node information form end of
45 list
46 8: get middle nodes of list
47 Enter option Number : 6
48
49 =====
50 Number of Nodes= 0
51      Choose one of the following
52 options
53 1: Add student
54 2: Delete student
55 3: View students
56 4: Delete All
57 5: get node information
58 6: Number of nodes
59 7: get node information form end of
60 list
61 8: get middle nodes of list
62 Enter option Number : 5
63
64
65 =====
66 =====
67 it is empty list no index in it
68
69      Choose one of the following
70 options
71 1: Add student
72 2: Delete student
73 3: View students
74 4: Delete All
75 5: get node information
76 6: Number of nodes
77 7: get node information form end of
78 list
79 8: get middle nodes of list
80 Enter option Number : 4
81
82
83 =====
84 =====
85 All Students Are Deleted
86 =====
87      Choose one of the following
88 options
89 1: Add student
90 2: Delete student
91 3: View students
92 4: Delete All
93 5: get node information
94 6: Number of nodes
95 7: get node information form end of
96 list
97 8: get middle nodes of list
98 Enter option Number : 3
99
100
101 =====
102 =====
103 ===== Empty list=====
104      Choose one of the following
105 options
106 1: Add student
107 2: Delete student
108 3: View students
109 4: Delete All
```

```

1  5: get node information
2  6: Number of nodes
3  7: get node information form end of
4  list
5  8: get middle nodes of list
6  Enter option Number : 2
7
8
9  =====
10 =====
11 it is empty we found nothing to delete
12     Choose one of the following
13 options
14 1: Add student
15 2: Delete student
16 3: View students
17 4: Delete All
18 5: get node information
19 6: Number of nodes
20 7: get node information form end of
21 list
22 8: get middle nodes of list
23 Enter option Number : 1
24
25
26 =====
27 =====
28 Enter ID: 1
29 Enter name: ayman
30 Enter height: 199
31     Choose one of the following
32 options
33 1: Add student
34 2: Delete student
35 3: View students
36 4: Delete All
37 5: get node information
38 6: Number of nodes
39 7: get node information form end of
40 list
41 8: get middle nodes of list
42 Enter option Number : 1
43
44
45 =====
46 =====
47 Enter ID: 2
48
49 Enter name: mo
50
51 Enter height: 198
52
53     Choose one of the following
54 options
55 1: Add student
56 2: Delete student
57 3: View students
58 4: Delete All
59 5: get node information
60 6: Number of nodes
61 7: get node information form end of
62 list
63 8: get middle nodes of list
64 Enter option Number : 1
65
66 =====
67 =====
68
69 Enter ID: 3
70
71 Enter name: haytham
72
73 Enter height: 197
74
75     Choose one of the following
76 options
77 1: Add student
78 2: Delete student
79 3: View students
80 4: Delete All
81 5: get node information
82 6: Number of nodes
83 7: get node information form end of
84 list
85 8: get middle nodes of list
86 Enter option Number : 1
87
88
89 =====
90 =====
91 Enter ID: 4
92
93 Enter name: rasha
94
95 Enter height: 175
96
97
98     Choose one of the following
99 options
100 1: Add student
101 2: Delete student
102 3: View students
103 4: Delete All
104 5: get node information
105 6: Number of nodes
106 7: get node information form end of
107 list
108 8: get middle nodes of list
109 Enter option Number : 1
110

```

```

1
2 =====
3 =====
4 Enter ID: 5
5
6 Enter name: samar
7
8 Enter height: 175
9
10 Choose one of the following
11 options
12 1: Add student
13 2: Delete student
14 3: View students
15 4: Delete All
16 5: get node information
17 6: Number of nodes
18 7: get node information form end of
19 list
20 8: get middle nodes of list
21 Enter option Number : 6
22
23
24 =====
25 =====
26 Number of Nodes= 5
27 Choose one of the following
28 options
29 1: Add student
30 2: Delete student
31 3: View students
32 4: Delete All
33 5: get node information
34 6: Number of nodes
35 7: get node information form end of
36 list
37 8: get middle nodes of list
38 Enter option Number : 7
39
40
41 =====
42 =====
43 Enter node number you need it from the
44 end of list: 4
45
46 Node number (4) from end of
47 list is:
48 ID : 2
49 Name : mo
50 Height : 198.000000
51
52
53
54
55
56
57 Choose one of the following
58 options
59 1: Add student
60 2: Delete student
61 3: View students
62 4: Delete All
63 5: get node information
64 6: Number of nodes
65 7: get node information form end of
66 list
67 8: get middle nodes of list
68 Enter option Number : 5
69
70
71 =====
72 =====
73 Enter index you need it :0
74
75 ID : 1
76 Name : ayman
77 Height : 199.000000
78 Choose one of the following
79 options
80 1: Add student
81 2: Delete student
82 3: View students
83 4: Delete All
84 5: get node information
85 6: Number of nodes
86 7: get node information form end of
87 list
88 8: get middle nodes of list
89 Enter option Number : 3
90
91
92 =====
93 =====
94 Record number : 1
95 ID : 1
96 Name : ayman
97 Height : 199.000000
98 Record number : 2
99 ID : 2
100 Name : mo
101 Height : 198.000000
102 Record number : 3
103 ID : 3
104 Name : haytham
105 Height : 197.000000
106 Record number : 4
107 ID : 4
108 Name : rasha
109 Height : 175.000000
110 Record number : 5

```

```

1  ID : 5
2  Name : samar
3  Height : 175.000000
4
5
6
7
8
9
10         Choose one of the following
11 options
12 1: Add student
13 2: Delete student
14 3: View students
15 4: Delete All
16 5: get node information
17 6: Number of nodes
18 7: get node information form end of
19 list
20 8: get middle nodes of list
21 Enter option Number : 1
22
23
24 =====
25 =====
26 Enter ID: 6
27
28 Enter name: alaa
29
30 Enter height: 199
31
32         Choose one of the following
33 options
34 1: Add student
35 2: Delete student
36 3: View students
37 4: Delete All
38 5: get node information
39 6: Number of nodes
40 7: get node information form end of
41 list
42 8: get middle nodes of list
43 Enter option Number : 8
44
45
46 =====
47 =====
48 list nodes=6 , so the middle node is
49 node:4
50 ID : 4
51 Name : rasha
52 Height : 175.000000
53         Choose one of the following
54 options
55 1: Add student
56 2: Delete student
57 3: View students
58 4: Delete All
59 5: get node information
60 6: Number of nodes
61 7: get node information form end of
62 list
63 8: get middle nodes of list
64 Enter option Number : 1
65
66
67 =====
68 =====
69 Enter ID: 1955
70
71 Enter name: gamal
72
73 Enter height: 192
74
75
76
77
78         Choose one of the following
79 options
80 1: Add student
81 2: Delete student
82 3: View students
83 4: Delete All
84 5: get node information
85 6: Number of nodes
86 7: get node information form end of
87 list
88 8: get middle nodes of list
89 Enter option Number : 8
90
91
92 =====
93 =====
94 list nodes=7 , so the middle node is
95 node:4
96 ID : 4
97 Name : rasha
98 Height : 175.000000
99         Choose one of the following
100 options
101 1: Add student
102 2: Delete student
103 3: View students
104 4: Delete All
105 5: get node information
106 6: Number of nodes
107 7: get node information form end of
108 list
109 8: get middle nodes of list
110 Enter option Number : 5

```

```

1
2
3 =====
4 =====
5 Enter index you need it :8
6
7 index : 8 is not founded
8 Choose one of the following
9 options
10 1: Add student
11 2: Delete student
12 3: View students
13 4: Delete All
14 5: get node information
15 6: Number of nodes
16 7: get node information form end of
17 list
18 8: get middle nodes of list
19 Enter option Number : 7
20
21
22 =====
23 =====
24 Enter node number you need it from the
25 end of list: 10
26
27 Error you enter number bigger than
28 number of list nodes
29 you enter: 10 , the number of list
30 nodes=7
31
32
33
34
35
36
37
38
39
40 Choose one of the following
41 options
42 1: Add student
43 2: Delete student
44 3: View students
45 4: Delete All
46 5: get node information
47 6: Number of nodes
48 7: get node information form end of
49 list
50 8: get middle nodes of list
51 Enter option Number : 2
52
53
54 =====
55 =====
56 Enter select ID student to be deleted
57 : 1
58
59 we deleted all information for student
60 =ayman
61 =====
62 Choose one of the following
63 options
64 1: Add student
65 2: Delete student
66 3: View students
67 4: Delete All
68 5: get node information
69 6: Number of nodes
70 7: get node information form end of
71 list
72 8: get middle nodes of list
73 Enter option Number : 3
74
75
76 =====
77 =====
78 Record number : 1
79 ID : 2
80 Name : mo
81 Height : 198.000000
82 Record number : 2
83 ID : 3
84 Name : haytham
85 Height : 197.000000
86 Record number : 3
87 ID : 4
88 Name : rasha
89 Height : 175.000000
90 Record number : 4
91 ID : 5
92 Name : samar
93 Height : 175.000000
94 Record number : 5
95 ID : 6
96 Name : alaa
97 Height : 199.000000
98 Record number : 6
99 ID : 1955
100 Name : gamal
101 Height : 192.000000
102
103
104 Choose one of the following
105 options
106 1: Add student
107 2: Delete student
108 3: View students
109 4: Delete All
110 5: get node information

```

```

1 6: Number of nodes
2 7: get node information form end of
3 list
4 8: get middle nodes of list
5 Enter option Number : 2
6
7
8 =====
9 =====
10 Enter select ID student to be deleted
11 : 9
12
13 this ID is not found please enter
14 correct ID
15 Choose one of the following
16 options
17 1: Add student
18 2: Delete student
19 3: View students
20 4: Delete All
21 5: get node information
22 6: Number of nodes
23 7: get node information form end of
24 list
25 8: get middle nodes of list
26 Enter option Number : 2
27
28
29 =====
30 =====
31 Enter select ID student to be deleted
32 : 1955
33
34 we deleted all information for student
35 =gamal
36 =====
37 Choose one of the following
38 options
39 1: Add student
40 2: Delete student
41 3: View students
42 4: Delete All
43 5: get node information
44 6: Number of nodes
45 7: get node information form end of
46 list
47 8: get middle nodes of list
48 Enter option Number : 3
49
50
51 =====
52 =====
53 Record number : 1
54 ID : 2
55 Name : mo
56 Height : 198.000000
57 Record number : 2
58 ID : 3
59 Name : haytham
60 Height : 197.000000
61 Record number : 3
62 ID : 4
63 Name : rasha
64 Height : 175.000000
65 Record number : 4
66 ID : 5
67 Name : samar
68 Height : 175.000000
69 Record number : 5
70 ID : 6
71 Name : alaa
72 Height : 199.000000
73 Choose one of the following
74 options
75 1: Add student
76 2: Delete student
77 3: View students
78 4: Delete All
79 5: get node information
80 6: Number of nodes
81 7: get node information form end of
82 list
83 8: get middle nodes of list
84 Enter option Number : 2
85
86
87 =====
88 =====
89 Enter select ID student to be deleted
90 : 4
91
92 we deleted all information for student
93 =rasha
94 =====
95 Choose one of the following
96 options
97 1: Add student
98 2: Delete student
99 3: View students
100 4: Delete All
101 5: get node information
102 6: Number of nodes
103 7: get node information form end of
104 list
105 8: get middle nodes of list
106 Enter option Number : 2
107
108
109 =====
110 =====

```

```

1  Enter select ID student to be deleted
2  : 3
3
4  we deleted all information for student
5  =haytham
6  =====
7      Choose one of the following
8  options
9      1: Add student
10     2: Delete student
11     3: View students
12     4: Delete All
13     5: get node information
14     6: Number of nodes
15     7: get node information form end of
16 list
17     8: get middle nodes of list
18 Enter option Number : 3
19
20
21 =====
22 =====
23
24
25
26         Record number : 1
27 ID : 2
28 Name : mo
29 Height : 198.000000
30         Record number : 2
31 ID : 5
32 Name : samar
33 Height : 175.000000
34         Record number : 3
35 ID : 6
36 Name : alaa
37 Height : 199.000000
38         Choose one of the following
39 options
40     1: Add student
41     2: Delete student
42     3: View students
43     4: Delete All
44     5: get node information
45     6: Number of nodes
46     7: get node information form end of
47 list
48     8: get middle nodes of list
49 Enter option Number : 8
50
51
52 =====
53 =====
54 list nodes=3 , so the middle node is
55 node:2
56 ID : 5
57 Name : samar
58 Height : 175.000000
59         Choose one of the following
60 options
61     1: Add student
62     2: Delete student
63     3: View students
64     4: Delete All
65     5: get node information
66     6: Number of nodes
67     7: get node information form end of
68 list
69     8: get middle nodes of list
70 Enter option Number : 4
71
72
73 =====
74 =====
75 All Students Are Deleted
76 =====
77         Choose one of the following
78 options
79     1: Add student
80     2: Delete student
81     3: View students
82     4: Delete All
83     5: get node information
84     6: Number of nodes
85     7: get node information form end of
86 list
87     8: get middle nodes of list
88 Enter option Number : 8
89
90
91 =====
92 =====
93 it is empty list ====
94
95
96
97         Choose one of the following
98 options
99     1: Add student
100    2: Delete student
101    3: View students
102    4: Delete All
103    5: get node information
104    6: Number of nodes
105    7: get node information form end of
106 list
107    8: get middle nodes of list
108 Enter option Number : 7
109

```

```

1                                     56
2 =====                          57
3 =====                          58
4 it is empty list ====            59
5     Choose one of the following  60
6 options                          61
7 1: Add student                   62     Choose one of the following
8 2: Delete student                63 options
9 3: View students                 64 1: Add student
10 4: Delete All                   65 2: Delete student
11 5: get node information          66 3: View students
12 6: Number of nodes              67 4: Delete All
13 7: get node information form end 68 5: get node information
14 of list                         69 6: Number of nodes
15 8: get middle nodes of list      70 7: get node information form end of
16 Enter option Number : 6         71 list
17                                 72 8: get middle nodes of list
18                                 73 Enter option Number : 2
19 =====                          74
20 =====                          75
21 Number of Nodes= 0              76 =====
22     Choose one of the following  77 =====
23 options                          78 it is empty we found nothing to delete
24 1: Add student                   79     Choose one of the following
25 2: Delete student                80 options
26 3: View students                 81 1: Add student
27 4: Delete All                   82 2: Delete student
28 5: get node information          83 3: View students
29 6: Number of nodes              84 4: Delete All
30 7: get node information form end 85 5: get node information
31 of list                         86 6: Number of nodes
32 8: get middle nodes of list      87 7: get node information form end of
33 Enter option Number : 5         88 list
34                                 89 8: get middle nodes of list
35                                 90 Enter option Number :
36 =====
37 =====
38 it is empty list no index in it
39     Choose one of the following
40 options
41 1: Add student
42 2: Delete student
43 3: View students
44 4: Delete All
45 5: get node information
46 6: Number of nodes
47 7: get node information form end of
48 list
49 8: get middle nodes of list
50 Enter option Number : 3
51
52
53 =====
54 =====
55 ===== Empty list=====

```