

Data Structure

Fifo:

```
=====FIFO is initialized=====
FIFO Enqueue (0)
FIFO enqueue is-----Done
FIFO Enqueue (1)
FIFO enqueue is-----Done
FIFO Enqueue (2)
FIFO enqueue is-----Done
FIFO Enqueue (3)
FIFO enqueue is-----Done
FIFO Enqueue (4)
FIFO enqueue is-----Done
FIFO Enqueue (5)
FIFO enqueue is-----Failed
FIFO Enqueue (6)
FIFO enqueue is-----Failed
=====FIFO print=====
0
1
2
3
4
=====
=====FIFO Dequeue 0 is Done=====
=====FIFO Dequeue 1 is Done=====
=====FIFO print=====
2
3
4
=====
```

Lifo

```
UART_LIFO add : 0
UART_LIFO add : 1
UART_LIFO add : 2
UART_LIFO add : 3
UART_LIFO add : 4
UART_LIFO get : 4
UART_LIFO get : 3
UART_LIFO get : 2
UART_LIFO get : 1
UART_LIFO get : 0
```

LinkedList:

1-Add Students

```
9- Get Index Of Students From End
Enter Option Number
1
=====
Enter your ID:
1
Enter your Name:
Alaa
Enter your Height:
162

=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
1
=====
Enter your ID:
2
Enter your Name:
Sama
Enter your Height:
165
```

2-Length of List

```
=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
7
=====
Number of Student : 4
=====
```

3-Display Student

```

=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
4
=====
Record Number : 1
    ID: 1
    Name: Alaa
    Height: 162.000000
Record Number : 2
    ID: 2
    Name: Sama
    Height: 165.000000
Record Number : 3
    ID: 3
    Name: Hamsa
    Height: 163.000000
Record Number : 4
    ID: 4
    Name: Raed
    Height: 167.000000
=====

```

4-Get Index Of Student

```

=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
6
=====
Enter Index Of Student
3
[
    Index Number : 3
        ID: 3
        Name: Hamsa
        Height: 163.000000
=====

```

5-Get Middle Of List

```
=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
8
=====

        ID: 3
        Name: Hamsa
        Height: 163.000000
```

6-Get Index Of Student From End

```
=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
9
=====
Enter Index Of Student
3

        Index Number From End: 3
                ID: 2
                Name: Sama
                Height: 165.000000
=====
```

7-Reverse Students

```

=====
Record Number : 1
    ID: 4
    Name: Raed
    Height: 167.000000
Record Number : 2
    ID: 3
    Name: Hamsa
    Height: 163.000000
Record Number : 3
    ID: 2
    Name: Sama
    Height: 165.000000
Record Number : 4
    ID: 1
    Name: Alaa
    Height: 162.000000
=====

```

8-Delete Student

```

Enter The ID you want to Delete
2

=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
4
{=====

Record Number : 1
    ID: 4
    Name: Raed
    Height: 167.000000
Record Number : 2
    ID: 3
    Name: Hamsa
    Height: 163.000000
Record Number : 3
    ID: 1
    Name: Alaa
    Height: 162.000000
=====

```

9-Delete All

```
=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
3
=====
```

```
=====
        choose one of the following options :
1- Add Students
2- Delete Student
3- Delete All
4- Display Students
5- Reverse Students
6- Get Index Of Students
7- Get Number Of Students
8- Get Middle Student Of List
9- Get Index Of Students From End
Enter Option Number
4
=====
List is Empty
```