

Hameed Khan

ID # 15066

BS Computer Science

4th Semester

Sessional Assignment No : 02

Design and Analysis of Algorithms

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16/06/2020

Q1:

```
QUEUE.py - D:\BS COMPUTER SCIENCE\4th SEMESTER\Design and Analysis of Algorithm\QUEUE.py (3.7.4)
File Edit Format Run Options Window Help
class Queue:
    def __init__(self):
        self.queu = []
        """ Add an item """
    def iqueu(self, item):
        self.queu.append(item)
        """ Remove an item """
    def oqueu(self):
        if len(self.queu) < 1:
            return None
        return self.queu.pop(0)
        """ Display the queu """
    def display(self):
        print (self.queu)
    def size(self):
        return len(self.queu)
print ("Adding an items:")
z = Queue()
z.i queu(6)
z.i queu(7)
z.i queu(8)
z.display()
z.oqueu()
print("After Removing an item:")
z.display()
z.oqueu()
print("After Removing an another item:")
z.display()
|
```

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Output:

```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: D:\WBS COMPUTER SCIENCE\4th SEMESTER\Design and Analysis of Algorithm\QUEUE.py
Adding an items:
[6, 7, 8]
After Removing an item:
[7, 8]
After Removing an another item:
[8]
>>>
```

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Q2:

```
Linked List.py - D:\BS COMPUTER SCIENCE\4th SEMESTER\Design and Analysis of Algorithm\Linked List.py (3.7.4)
File Edit Format Run Options Window Help
class Node:
    def __init__(self, item):
        self.item = item
        self.next = None

class Link_List:
    def __init__(self):
        self.head = None
if __name__ == '__main__':
    linklist = Link_List()

    linklist.head = Node(50)
    secnd = Node(100)
    thrd = Node(150)
    forth = Node(200)

    linklist.head.next = secnd
    secnd.next = thrd
    thrd.next = forth
    |

    while linklist.head != None:
        print(linklist.head.item, end = " ")
        linklist.head = linklist.head.next
    |

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```

Output:

```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: D:\BS COMPUTER SCIENCE\4th SEMESTER\Design and Analysis of Algorithm\Linked List.py
50 100 150 200
>>> |

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```