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D
PRAKTIKUM ALGOSTRUK

Laporan Praktikum Algostruk
Modul 8
Stacks and Queues

QUEUES

4a.Berikut screenshot program nya :


```python
class Queue(object):
    def __init__(self):
        self.qlist=[]

    def isEmpty(self):
        return len(self) ==0
    def __len__(self):
        return len(self.qlist)
    def enqueue(self,data):
        self.qlist.append(data)
    def dequeue(self):
        assert not self.isEmpty()
        return self.qlist.pop(0)
    def getFrontMost(self):
        return self.qlist.pop(0)
    def getRearMost(self):
        return self.qlist.pop(-1)

A = Queue()
A.enqueue("Jeruk")
A.enqueue("Tomat")
A.enqueue("Mangga")
A.enqueue("Duku")
A.enqueue("Pepaya")
A.enqueue("Kelengkeng")

front = A.getFrontMost()
rear = A.getRearMost()
print ("Nilai maksimal = ", front)
print ("Nilai minimal = ", rear)
```
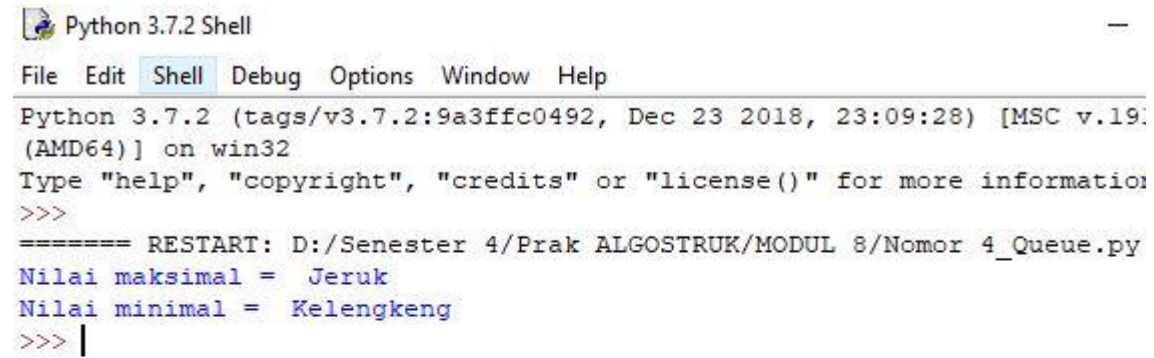
Output :

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```
Python 3.7.2 Shell                                              —

File  Edit  Shell  Debug  Options  Window  Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.19]
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more informatior
>>>
======= RESTART: D:/Senester 4/Prak ALGOSTRUK/MODUL 8/Nomor 4_Queue.py
Nilai maksimal =  Jeruk
Nilai minimal =  Kelengkeng
>>> |
```

4b. Berikut screenshot program nya :

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Nomor 4_Priority.py - D:/Senester 4/Prak ALGOSTRUK/MODUL 8/Nomor 4_Priority.py (3.7.2) — ☐

File Edit Format Run Options Window Help

```python
import heapq
class PriorityQueue(object):
    def __init__(self):
        self.qlist= []
    def __len__(self):
        return len(self.qlist)
    def isEmpty(self):
        return len(self)==0
    def enqueue(self, data, prior):
        heapq.heappush(self.qlist, (prior, data))
        self.qlist.sort()
    def dequeue(self):
        return self.qlist.pop(-1)
    def getFrontMost(self):
        return self.qlist[-1]
    def getRearMost(self):
        return self.qlist[0]

A = PriorityQueue()
A.enqueue("Jeruk",4)
A.enqueue("Tomat",2)
A.enqueue("Mangga",0)
A.enqueue("Duku",5)
A.enqueue("Pepaya",2)
print(A.qlist)
A.dequeue()
print(A.qlist)
```

Output :

Python 3.7.2 Shell — ☐

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```
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.1916 64 bit
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/Senester 4/Prak ALGOSTRUK/MODUL 8/Nomor 4_Priority.py =====
[(0, 'Mangga'), (2, 'Pepaya'), (2, 'Tomat'), (4, 'Jeruk'), (5, 'Duku')]
[(0, 'Mangga'), (2, 'Pepaya'), (2, 'Tomat'), (4, 'Jeruk')]
>>>
```
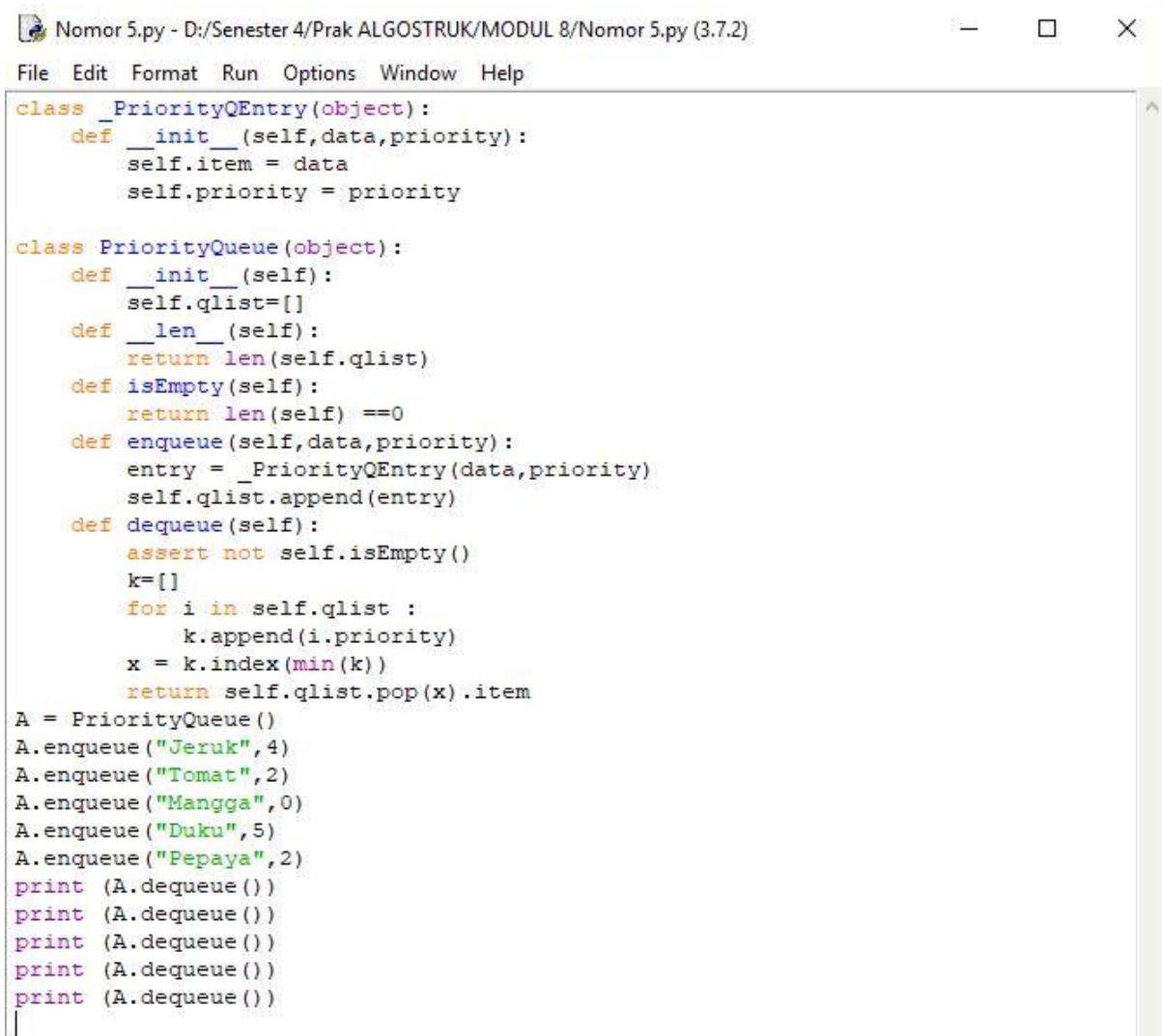
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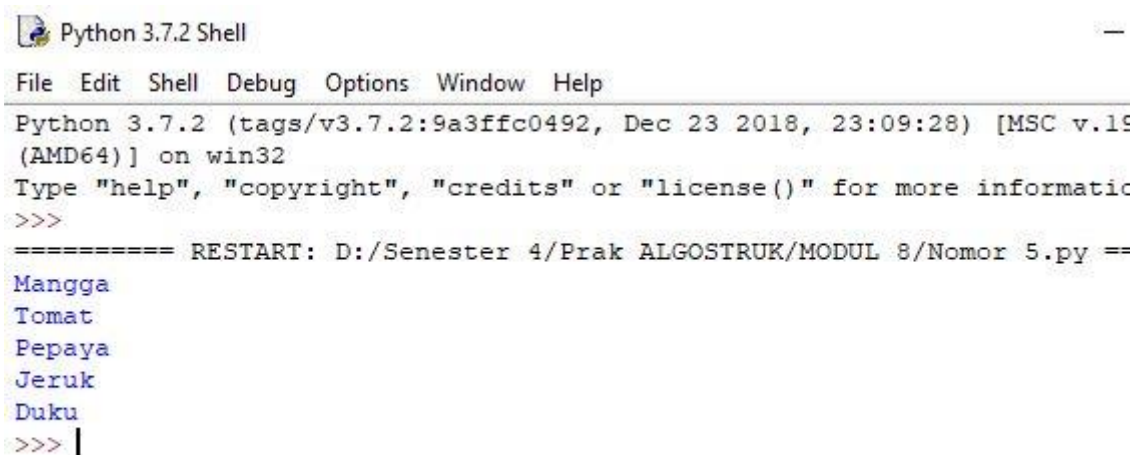5. Berikut screenshot program nya :

```
Nomor 5.py - D:/Senester 4/Prak ALGOSTRUK/MODUL 8/Nomor 5.py (3.7.2)        —    □    ×

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class _PriorityQEntry(object):
    def __init__(self,data,priority):
        self.item = data
        self.priority = priority

class PriorityQueue(object):
    def __init__(self):
        self.qlist=[]
    def __len__(self):
        return len(self.qlist)
    def isEmpty(self):
        return len(self) ==0
    def enqueue(self,data,priority):
        entry = _PriorityQEntry(data,priority)
        self.qlist.append(entry)
    def dequeue(self):
        assert not self.isEmpty()
        k=[]
        for i in self.qlist :
            k.append(i.priority)
        x = k.index(min(k))
        return self.qlist.pop(x).item
A = PriorityQueue()
A.enqueue("Jeruk",4)
A.enqueue("Tomat",2)
A.enqueue("Mangga",0)
A.enqueue("Duku",5)
A.enqueue("Pepaya",2)
print (A.dequeue())
print (A.dequeue())
print (A.dequeue())
print (A.dequeue())
print (A.dequeue())
|
```

Output :

```
Python 3.7.2 Shell                                                —

File  Edit  Shell  Debug  Options  Window  Help

Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 23:09:28) [MSC v.19
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more informatic
>>>
========== RESTART: D:/Senester 4/Prak ALGOSTRUK/MODUL 8/Nomor 5.py ==
Mangga
Tomat
Pepaya
Jeruk
Duku
>>> |
```

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