

```

1 class PriorityQueueNode:
2     def __init__(self, data, priority):
3         self.data = data
4         self.priority = priority
5         self.next = None
6
7
8 class PriorityQueue:
9     def __init__(self):
10         self.head = None
11
12     def is_empty(self):
13         return self.head is None
14
15     def insert(self, data, priority):
16         new_node = PriorityQueueNode(data, priority)
17
18         if self.is_empty() or priority > self.head.priority:
19             new_node.next = self.head
20             self.head = new_node
21         else:
22             current = self.head
23             while current.next is not None and current.next
24 .priority > priority:
25                 current = current.next
26             new_node.next = current.next
27             current.next = new_node
28
29     def remove(self):
30         if self.is_empty():
31             print("Antrian kosong")
32             return None
33         else:
34             removed_data = self.head.data
35             self.head = self.head.next
36             return removed_data
37
38     def display(self):
39         current = self.head
40         while current:
41             print(f>Data: {current.data}, Priority: {current.
42 priority}")
43             current = current.next
44
45 def main():
46     priority_queue = PriorityQueue()
47
48     # Menambahkan elemen ke dalam priority queue
49     priority_queue.insert("Task 1", 3)
50     priority_queue.insert("Task 2", 1)
51     priority_queue.insert("Task 3", 2)
52
53     print("Antrian awal:")
54     priority_queue.display()
55
56     # Menghapus elemen dengan prioritas tertinggi
57     removed_item = priority_queue.remove()
58     print(f"\nMenghapus item dengan data: {removed_item}\n")
59
60     print("Antrian setelah penghapusan:")
61     priority_queue.display()
62
63 if __name__ == "__main__":
64     main()
65

```

