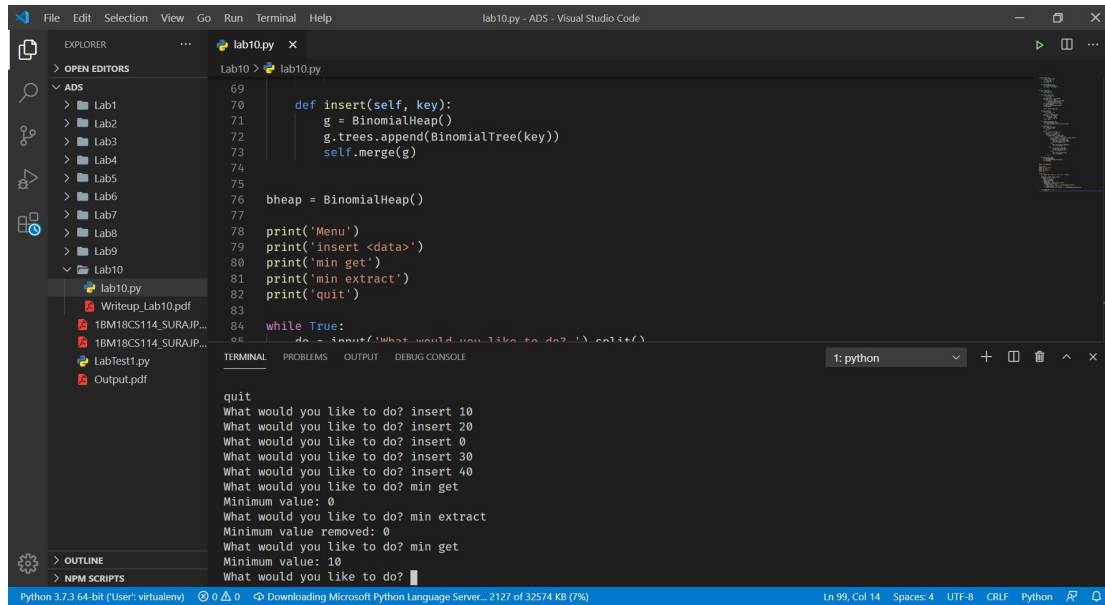


Output



The screenshot displays the Visual Studio Code interface with a Python file named `lab10.py` open. The file implements a Binomial Heap data structure. The code includes a `BinomialTree` class with methods for inserting a new tree and merging two trees. The `BinomialHeap` class uses these to maintain a collection of trees, ensuring the minimum element is at the root. The program provides a menu-driven interface for inserting, extracting, and querying the minimum value.

```
69
70     def insert(self, key):
71         g = BinomialTree(key)
72         g.trees.append(BinomialTree(key))
73         self.merge(g)
74
75
76     bheap = BinomialHeap()
77
78     print('Menu')
79     print('insert <data>')
80     print('min get')
81     print('min extract')
82     print('quit')
83
84     while True:
85         data = input('What would you like to do? (i, e, x, q): ')
86         if data == 'i':
87             value = int(input('Enter a value to insert: '))
88             self.insert(value)
89         elif data == 'e':
90             self.extract()
91         elif data == 'x':
92             self.min_get()
93         elif data == 'q':
94             self.quit()
95         else:
96             print('Invalid input')
```

The terminal window shows the program's execution. It prompts the user for input, and the user enters a series of commands: `quit`, `insert 10`, `insert 20`, `insert 0`, `insert 30`, `insert 40`, `min get`, `min get`, `min extract`, `min get`, `min get`, and `quit`. The output shows the minimum value being 0 after the first `min get` command, and 10 after the second `min get` command.

```
quit
What would you like to do? insert 10
What would you like to do? insert 20
What would you like to do? insert 0
What would you like to do? insert 30
What would you like to do? insert 40
What would you like to do? min get
Minimum value: 0
What would you like to do? min extract
Minimum value removed: 0
What would you like to do? min get
Minimum value: 10
What would you like to do? quit
```