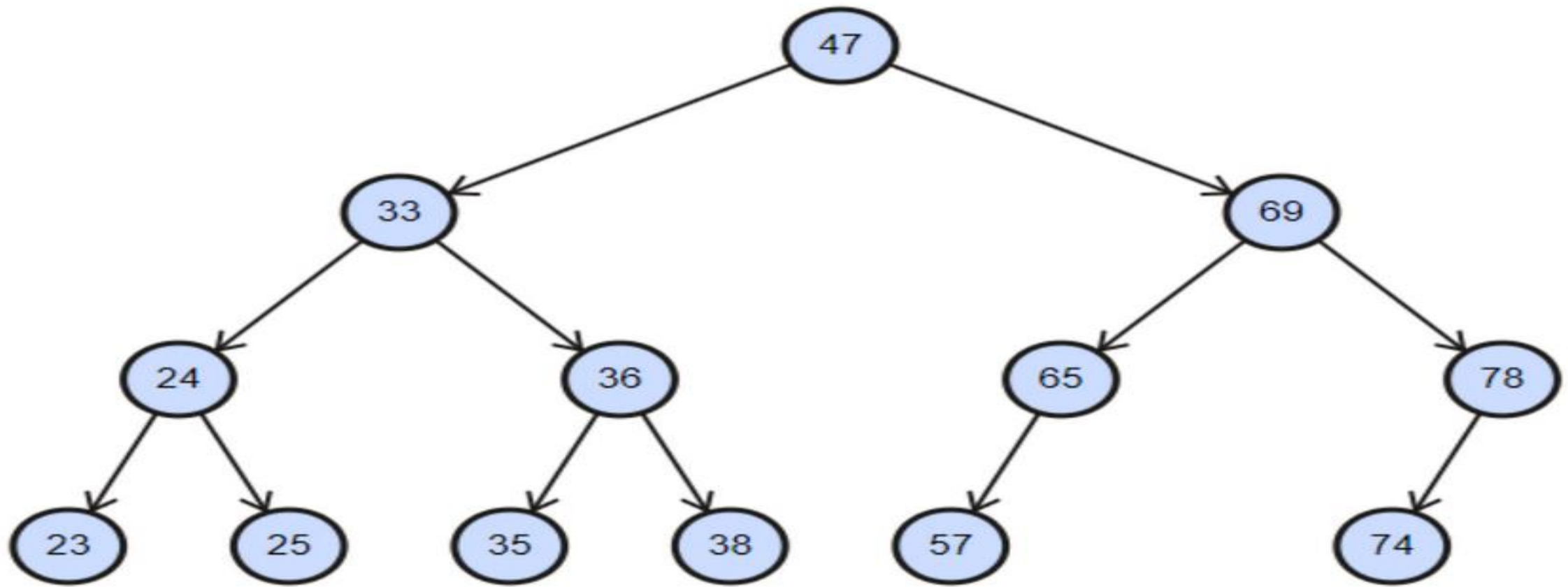


Node	A	B	C	D	E	F	G	Parent	Cost
A	0	3	5	∞	∞	∞	∞	None	0
B	0	0	4	10	7	∞	∞	A	3
C	0	0	0	∞	∞	∞	∞	B	7
E	0	0	∞	∞	0	11	∞	B	7
D	0	0	17	0	∞	19	21	B	10
F	0	0	∞	∞	0	0	16	E	11
G	0	0	∞	∞	0	0	0	F	16

If we traverse the nodes according to Dijkstra's Shortest Path Algorithm, we can sketch the table above. According to table, we can define our path like that :

'A -> B -> E -> F -> G'. Dijkstra's Algorithm Works by calculating the closest nodes weights after adding the current node's cost. After calculating every reachable node's cost, now its time to change current node and do same operations for this node. For unreachahle nodes, we just memorize that they are unreachable at this time and search for an appropriate way to them. If we find any path to any node that shorter than the ways that we found before, we can update our way information.



Preorder : 47 -> 33 -> 24 -> 23 -> 25 -> 36 -> 35 -> 38 -> 69 -> 65 -> 57 -> 78 -> 74

Inorder : 23 -> 24 -> 25 -> 33 -> 35 -> 36 -> 38 -> 47 -> 57 -> 65 -> 69 -> 74 -> 78

Postorder : 23 -> 25 -> 24 -> 35 -> 38 -> 36 -> 33 -> 57 -> 65 -> 74 -> 78 -> 69 -> 47

```
def insertionSort(array):  
    for i in range(1, len(array)):  
        while(array[i] < array[i-1]):  
            array[i], array[i-1] = array[i-1], array[i]  
            i -= 1  
    return array
```

```
list = []  
prompt = 0  
print("Press enter for stop the inserting process.")  
while(prompt != ""):  
    prompt = input("Please enter a number to add list : ")  
    if(prompt.isnumeric()):  
        list.append(int(prompt))  
        print("Number added to list.")  
    elif(not prompt.isnumeric()):  
        print("This isn't a number!")
```

```
list = insertionSort(list)
```

```
for i in range(0, len(list)):  
    print(list[i])
```