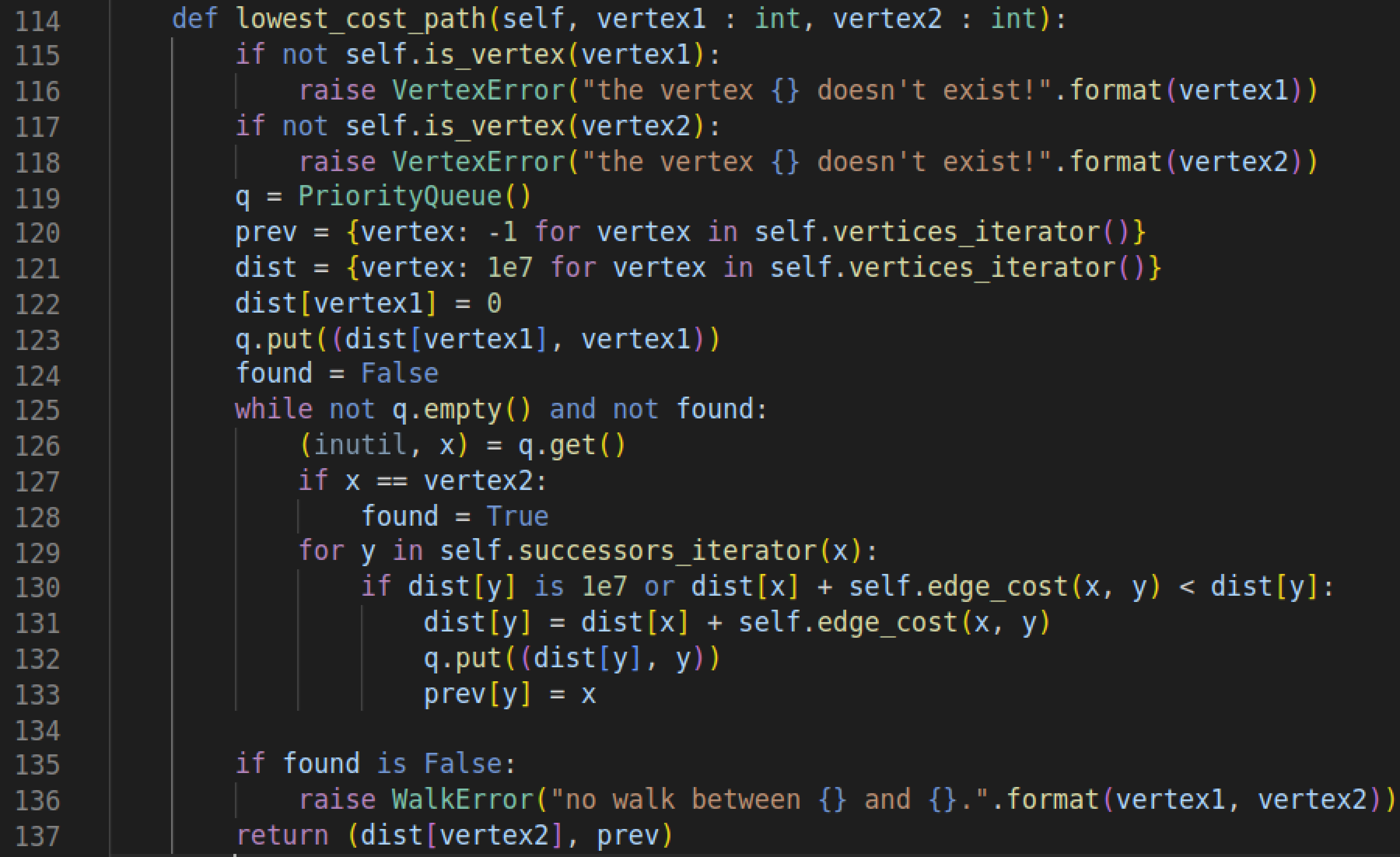

```python
    def lowest_cost_path(self, vertex1 : int, vertex2 : int):
        if not self.is_vertex(vertex1):
            raise VertexError("the vertex {} doesn't exist!".format(vertex1))
        if not self.is_vertex(vertex2):
            raise VertexError("the vertex {} doesn't exist!".format(vertex2))
        q = PriorityQueue()
        prev = {vertex: -1 for vertex in self.vertices_iterator()}
        dist = {vertex: 1e7 for vertex in self.vertices_iterator()}
        dist[vertex1] = 0
        q.put((dist[vertex1], vertex1))
        found = False
        while not q.empty() and not found:
            (inutil, x) = q.get()
            if x == vertex2:
                found = True
            for y in self.successors_iterator(x):
                if dist[y] is 1e7 or dist[x] + self.edge_cost(x, y) < dist[y]:
                    dist[y] = dist[x] + self.edge_cost(x, y)
                    q.put((dist[y], y))
                    prev[y] = x

        if found is False:
            raise WalkError("no walk between {} and {}.".format(vertex1, vertex2))
        return (dist[vertex2], prev)
```