

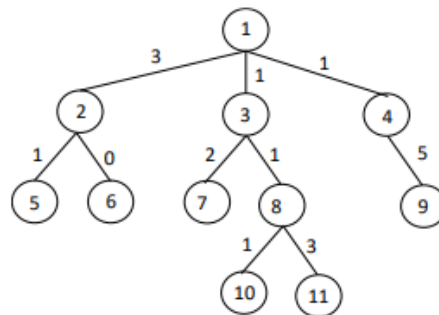
Homework

Exercise 1. Uninformed search (Homework)

Given is the tree below, where the tree branches are labeled with their cost. List the order in which the nodes are expanded using the following search strategies:

- Breadth-First Search (BFS);
- Uniform Cost Search (UCS) - when there is a tie, i.e. more than 1 candidate with the same cost, expand first the left-most node as shown on the figure.
- Depth-First Search (DFS)
- Iterative-Deepening Search (IDS).

Assume that none of the nodes are goal nodes, i.e. show the traversal of the whole tree using the search strategies.



- BFS
Expanded: 1,2,3,4,5,6,7,8,9,10,11
- UCS
Expanded: 1,3,4,8,2,7,10,6,5,11,9
- DFS
Expanded: 1,2,5,6,3,7,8,10,11,4,9
- IDS
Expanded: 1 | 1,2,3,4 | 1,2,5,6,3,7,8,4,9 | 1,2,5,6,3,7,8,10,11,4,9