

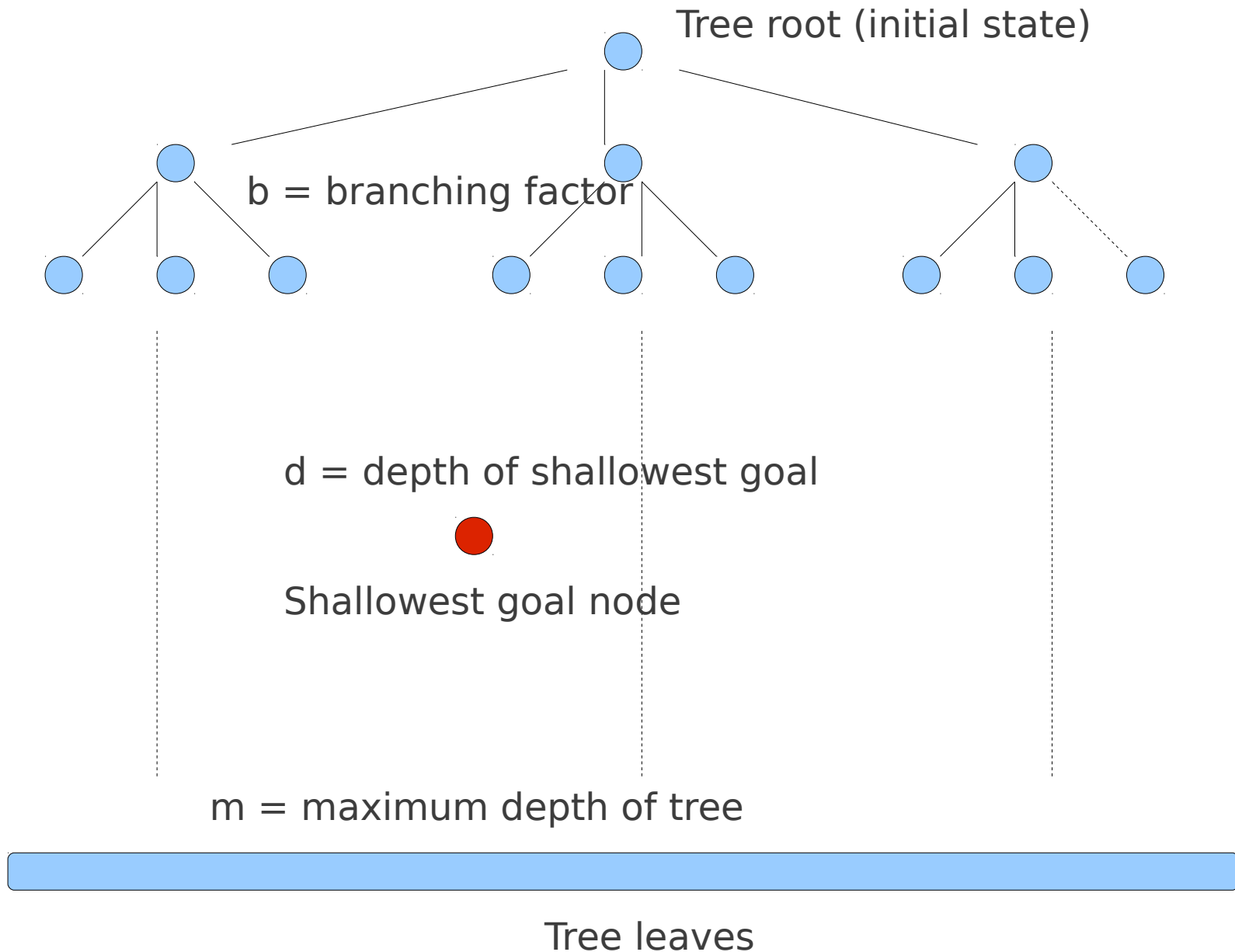
Uniformed (Blind) Search

- Breadth-first search
- Uniform-cost search
- Depth-first search
- Depth-limited search
- Iterative deepening depth-first search
- Bidirectional search

Evaluation Criteria

- Completeness
- Optimality
- Time complexity
- Space complexity

Complexity Parameters



Comparisons

Criterion	BFS	UC	DFS	DL	ID	BD
Complete	Yes ^a	Yes ^{a,e}	No	No	Yes ^a	Yes ^{a,f}
Optimal	Yes ^c	Yes	No	No	Yes ^c	Yes ^{c,f}
Time Complexity	$O(b^d)$	$v=1+C^*/\epsilon$ $O(b^v)$	$O(b^m)$	$O(b^l)$	$O(b^d)$	$O(b^{d/2})$
Space Complexity	$O(b^d)$	$v=1+C^*/\epsilon$ $O(b^v)$	$O(bm)$	$O(bl)$	$O(bd)$	$O(b^{d/2})$

- a – if b is finite
- c – if step-cost is identical for all actions
- e – if step-cost $>$ epsilon $>$ 0
- f – if both directions use BFS