Definition of a red-black tree

A red-black tree is a binary search tree which has the following *red-black properties*:

- Every node is either red or black.
- Every leaf (NULL) is black.
- If a node is red, then both its children are black.
- Every simple path from a node to a descendant leaf contains the same number of black nodes.

Algorithm

Searching a node in Red Black Tree

- Perform a binary search on the records in the current node.
- If a record with the search key is found, then return that record.
- If the current node is a leaf node and the key is not found, then report an unsuccessful search.
- Otherwise, follow the proper branch and repeat the process.