AI algorithms: Basic Search

depth-first search
breadth-first search
non-deterministic search
iterative deepening search
bidirectional search

Input:
A graph of nodes, a start node S and a goal node G
A queue Q of possible paths
Output:
A path from S to G
Algorithm:
$Q \leftarrow S$
Q2 $\leftarrow G$
depth $\leftarrow$ initial depth
while Q not empty AND G not reached / Q and Q2 not empty AND don't share a node
do
$p \leftarrow$ get (and remove) first path from Q
if p length $<$ *depth* **then**
$P \leftarrow$ all paths to children of p
Remove all paths from P containing loops
Add paths of P to front of Q
back
random place
front
back
end if
end while
if G reached / Q and Q2 share a node **then**
Succes
else
Failure / Repeat with *depth* + 1
end if