

From Book
Fundamentals of computer algorithms
pg. 368, 369

Algorithm

RBBackTrack(~~K~~) —

RB(1)

$n = h$

```
{  
  for (each  $x[k] \in T(x[1], \dots, x[k-1])$ ) do  
  {  
    if ( $B_k(x[1], x[2], \dots, x[k]) \neq 0$ ) then  
    {  
      if ( $x[1], x[2], \dots, x[k]$  is a path to an answer  
      node)  
      then  
        write ( $x[1:k]$ );  
      if (K < n) then RBBackTrack(K+1); //  
    }  
  }  
}
```

General Recursive algorithm for BackTracking

Algorithm I Backtrack (n)

```
{  
  k = 1;  
  while ( k <= n ) do  
  {  
    if ( there remains an untried  $x[k] \in$   
           $T(x[1], x[2], \dots, x[k-1])$  and  
        {  
           $B_k(x[1], \dots, x[k])$  is true ) then  
          if (  $(x[1], \dots, x[k])$  is a path to an answer  
              state )  
            then write (  $x[1..k]$  );  
           $k = k + 1$ ;  
        }  
    else  
      {  
         $k = k - 1$ ; // Backtracking to prev  
      }  
    }  
}
```

O/I Knapsack problem solⁿ using
Backtracking

Refer state space tree diagram
from folder
And p. program from
Lab 9