

Procedure Backtrack(DATA) (N. Nilsson)

```
1. if term(DATA)
    return NIL;
    (* term is a predicate that expresses the termination condition *)

2. if deadend(DATA)
    return FAIL;
    (* deadend is a predicate true for arguments that are known not to be on the path to solution
    *)

3. Rules <-- ApplRules(DATA);
    (* ApplRules is a function that computes the rules applicable to its argument and orders
    them either arbitrarily or according to heuristic merit *)

4. LOOP
    if Null(Rules)
        return FAIL;

    5.    R <-- First(Rules);
    6.    Rules <-- Tail(Rules);
    7.    RDATA <-- R(DATA);
    8.    Path <-- Backtrack(RDATA);
    9.    if Path = FAIL
            GoLOOP
    10. return CONS(R, Path)
11. ENDLOOP
```