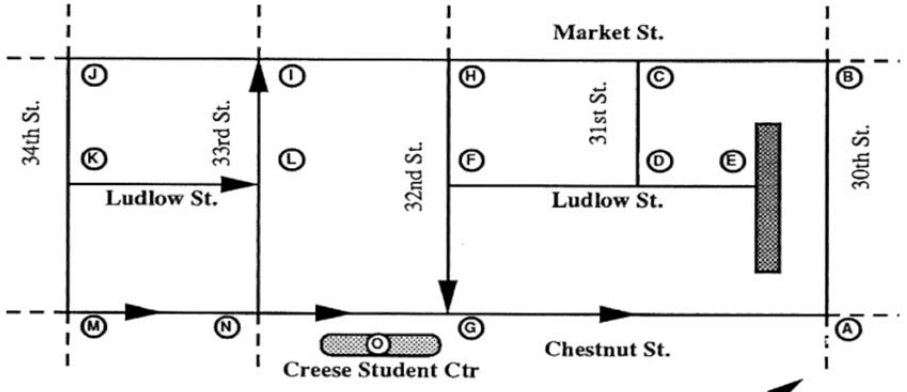
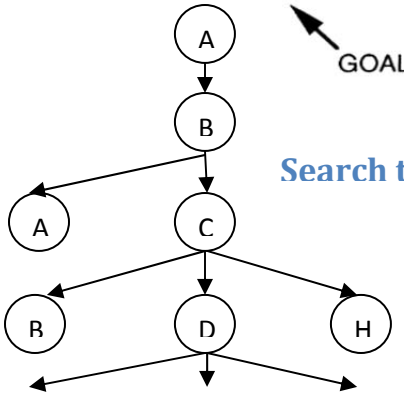
BackTrack on an explicit graph

```
1  backTrack( stateList )
2     state = first( stateList )
3     if( state in rest( stateList ) )
4         return FAILED-1                          // Cycle
5     if( deadEnd( state ))
6         return FAILED-2                          // Dead-end
7     if( goal( state ) )
8         return NULL
9     if( length ( stateList ) > depthBound        // Too deep
10        return FAILED-3
11
12    ruleSet = applicableRules(state)
13    if( ruleSet == NULL )
14        return FAILED-4                          // No moves
15
16    for-each rule r in ruleSet
17        newState = applyRule( r, state )
18        newStateList = addToFront( newState, stateList )
19        path = backTrack( newStateList )
20        if( path != FAILED-*)
21            return append(path, r)
22
23    return FAILED-5                              // All moves tried
```





Search tree

We will test rules for applicability in the order { ↑ ↓ → ← }

We will assume it is not possible to “drive off the map”:
only labeled nodes may be visited.