

## UCS-Pesudo Code

```
node <- problem.Initial-State,PATH-COST=  
frontier <-node */PRIORITY QUEUE*/  
explored <-empty  
loop do  
  if EMPTY?(frontier) then return failure  
  node <- PROCESS(frontier) */always choose the lowest cost node*/  
  If problem.Goal-Test (node.State) then return SOLUTION(node)  
  add node.STATE to explored  
  For each action in problem.ACTION(node.STATE) do  
    child <- CHILD-NODE (problem, node, action)  
    if child.STATE is not in explored or frontier then  
      INSERT(child, frontier) */insertion sort*/  
    elseif child.STATE is in frontier with higher PATH-COST then  
      replace that frontier node with Child
```