



Q3

Trace BFS, DFS, IDS and UCS ...

# BFS

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- ▶ Final Closed List [A B C D E]
- ▶ Solution path A B D G
- ▶ Order of node expansion A B C A C D A B D E B C G

# DFS

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- ▶ Final Closed List [A B C D]
- ▶ Solution path A B C D G
- ▶ Order of node expansion A B A C A B D B C G

# IDS

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- ▶ **D=0**
  - ▶ Final Closed List [A]
  - ▶ Solution **Failure**
  - ▶ Order of node expansion A
- ▶ **D=1**
  - ▶ Final Closed List [ABC]
  - ▶ Solution **Failure**
  - ▶ Order of node expansion A B C

# IDS <sub>cont</sub>

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## ▶ D=2

- ▶ Final Closed List [ABCDE]
- ▶ Solution **Failure**
- ▶ Order of node expansion A B A C D C A B D E

## ▶ D=3

- ▶ Final Closed List [ABCD]
- ▶ Solution path A B C D G
- ▶ Order of node expansion A B A C A B D B C G

# UCS

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- ▶ Final Closed List [ $A_0$   $C_2$   $B_5$   $D_5$   $E_5$ ]
- ▶ Solution path [ $A_0$   $C_2$   $D_5$   $G_6$ ]
- ▶ Order of node expansion  $A_0$   $C_2$   $A_4$   $B_5$   $B_5$   $D_5$   $E_5$   $G_6$