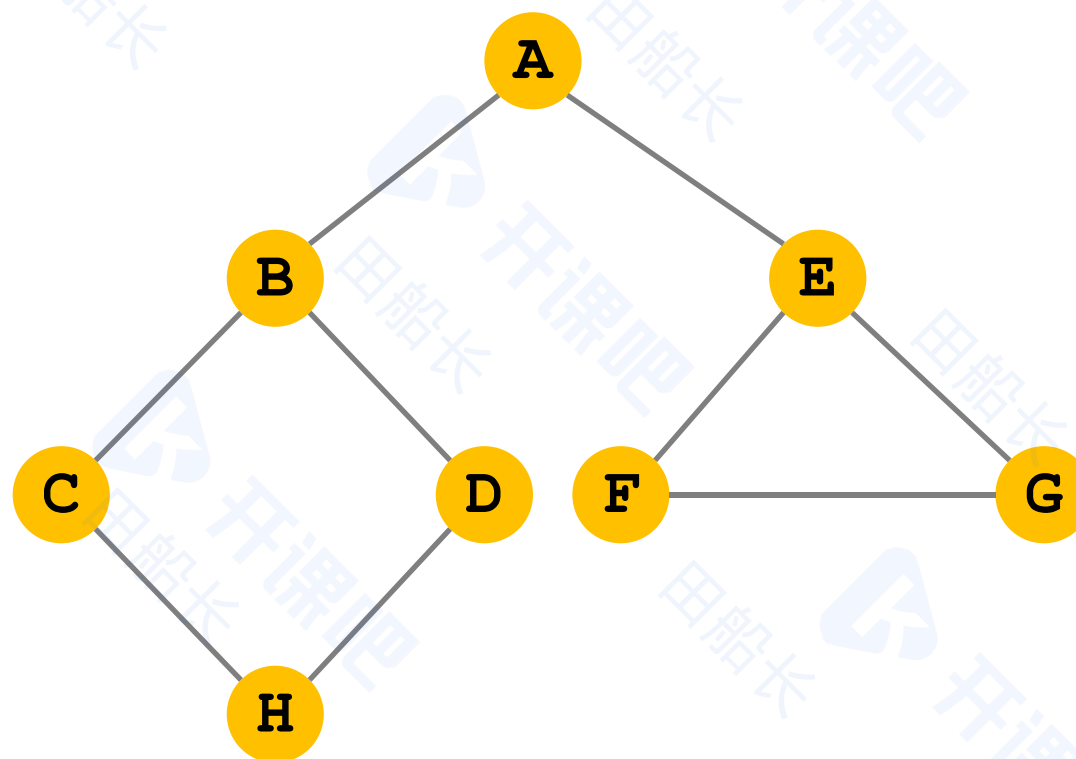
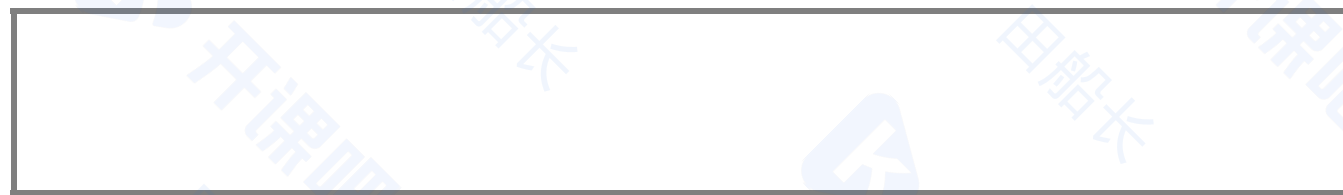


# 图的深度优先遍历

田船长

从起点出发，每次走到一个新的点时  
就以新的点为起点继续向下走  
当走到不能走时，再进行回溯  
深度优先遍历一般使用递归实现

# 深度优先遍历

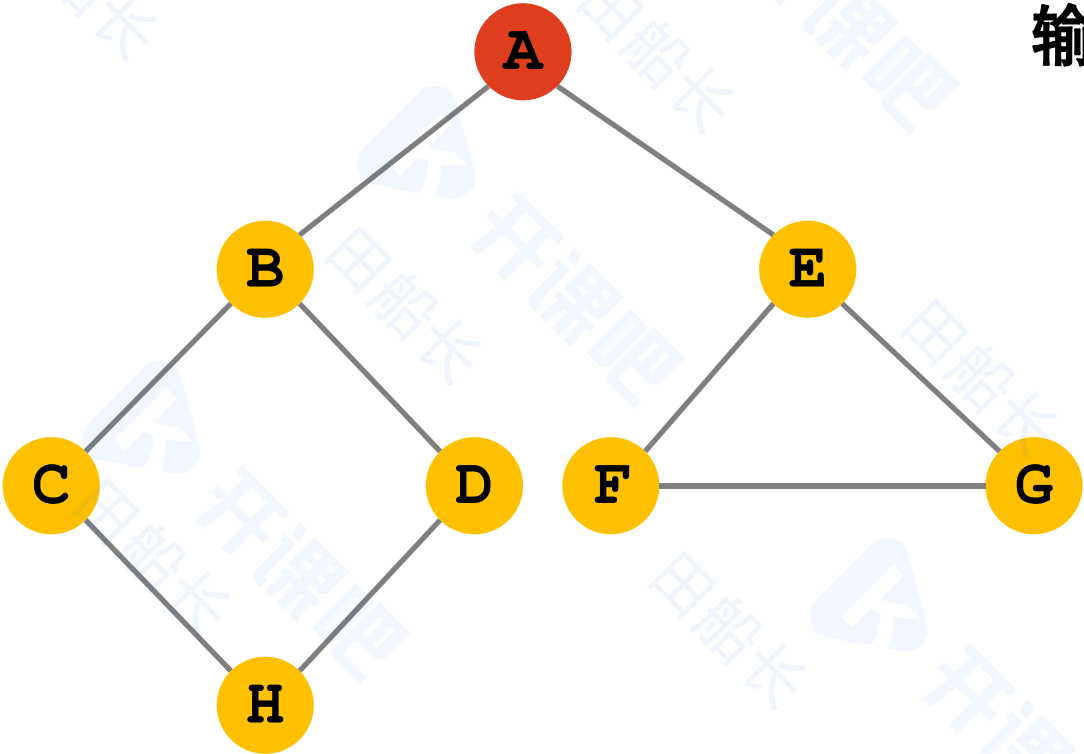


遍历序列:

# 深度优先遍历



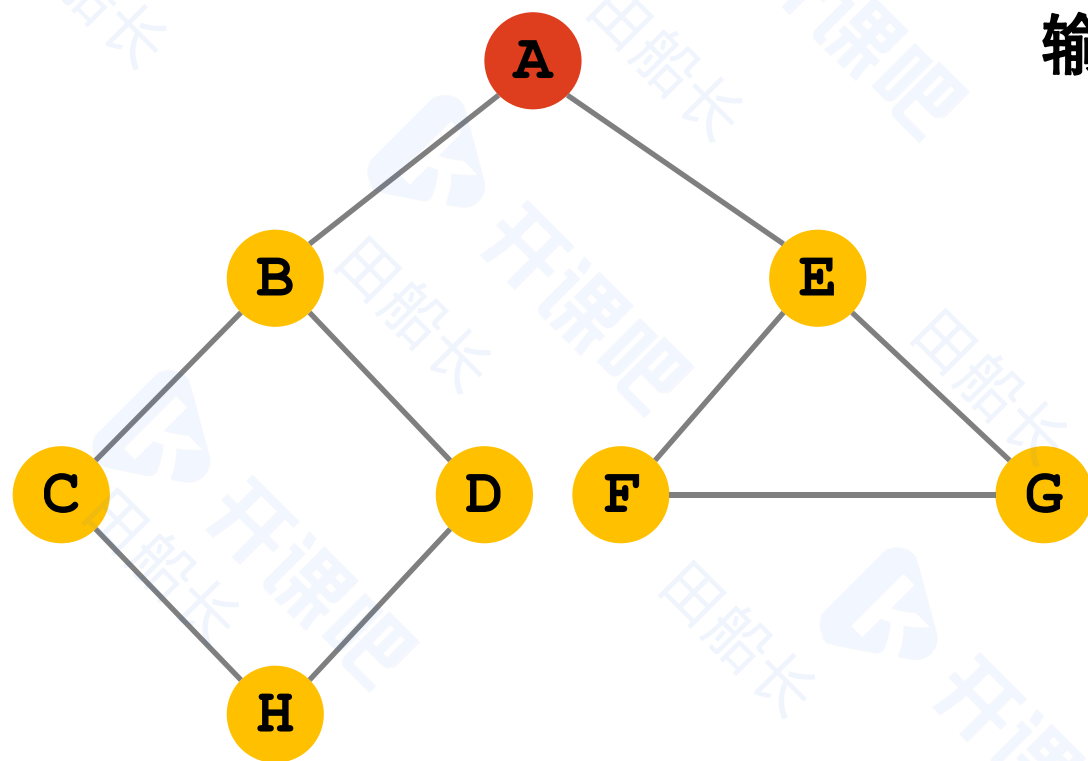
输出A



遍历序列：A

# 深度优先遍历

A



输出A

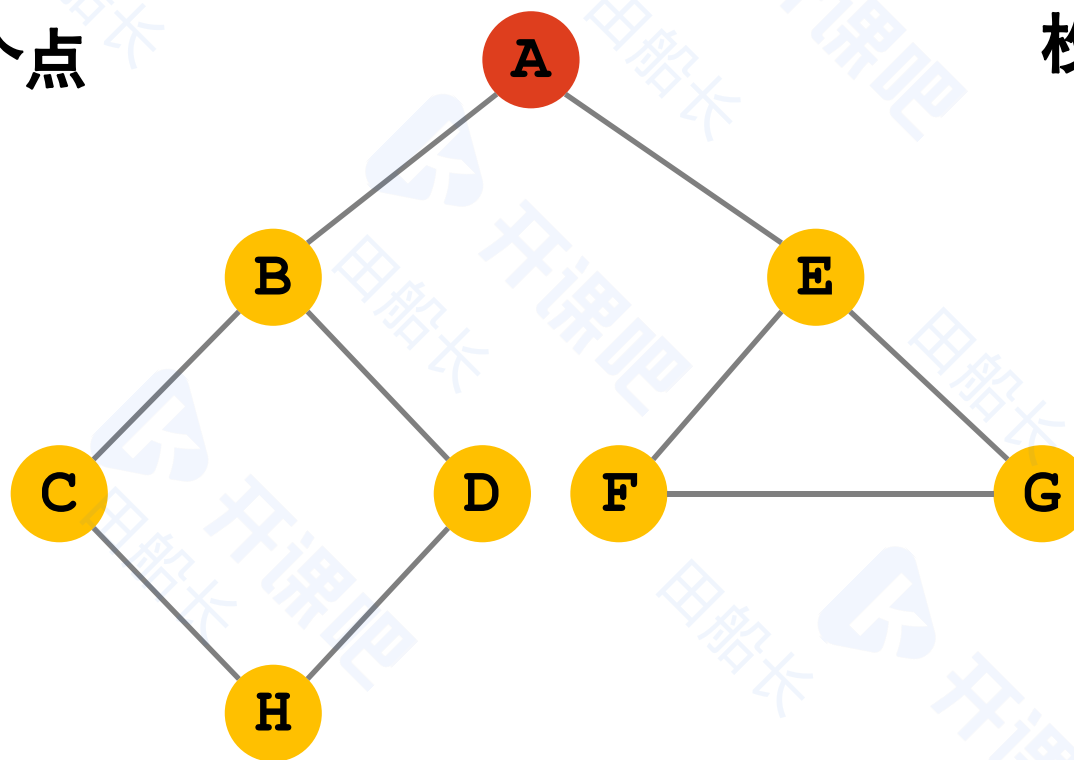
遍历序列: A

# 深度优先遍历

A

注意此时可以选择两个点  
无特殊要求时  
可以随意选择  
之后同理

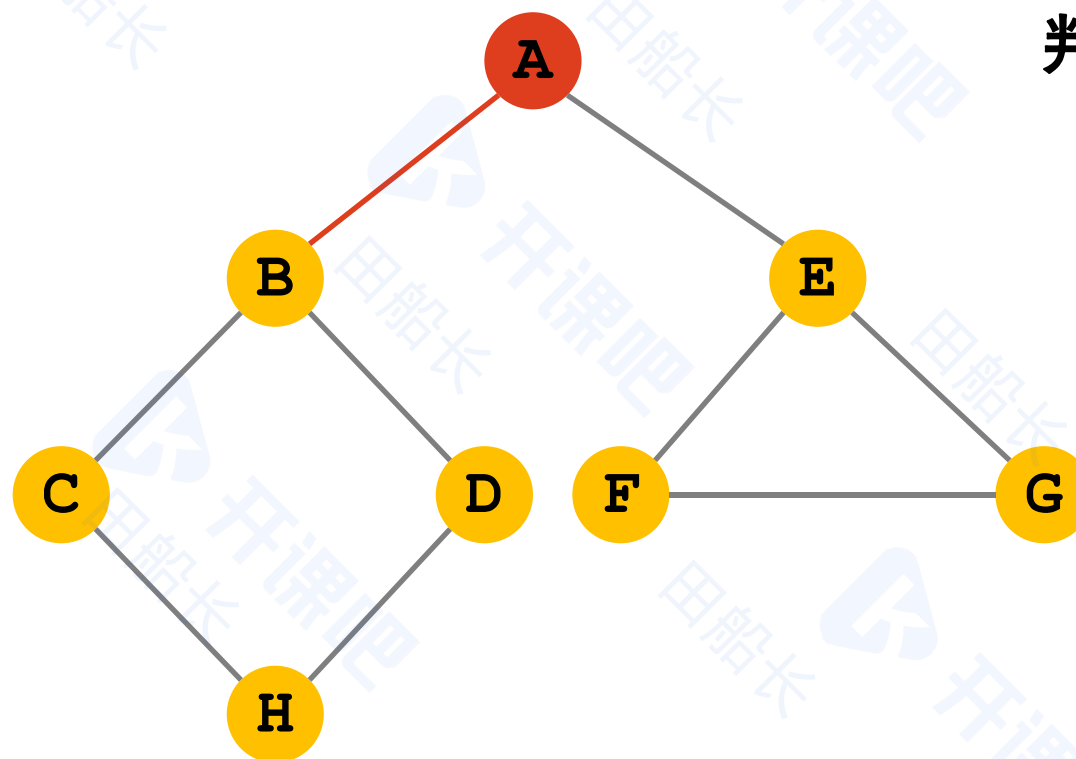
枚举A的相邻结点



遍历序列: A

# 深度优先遍历

A

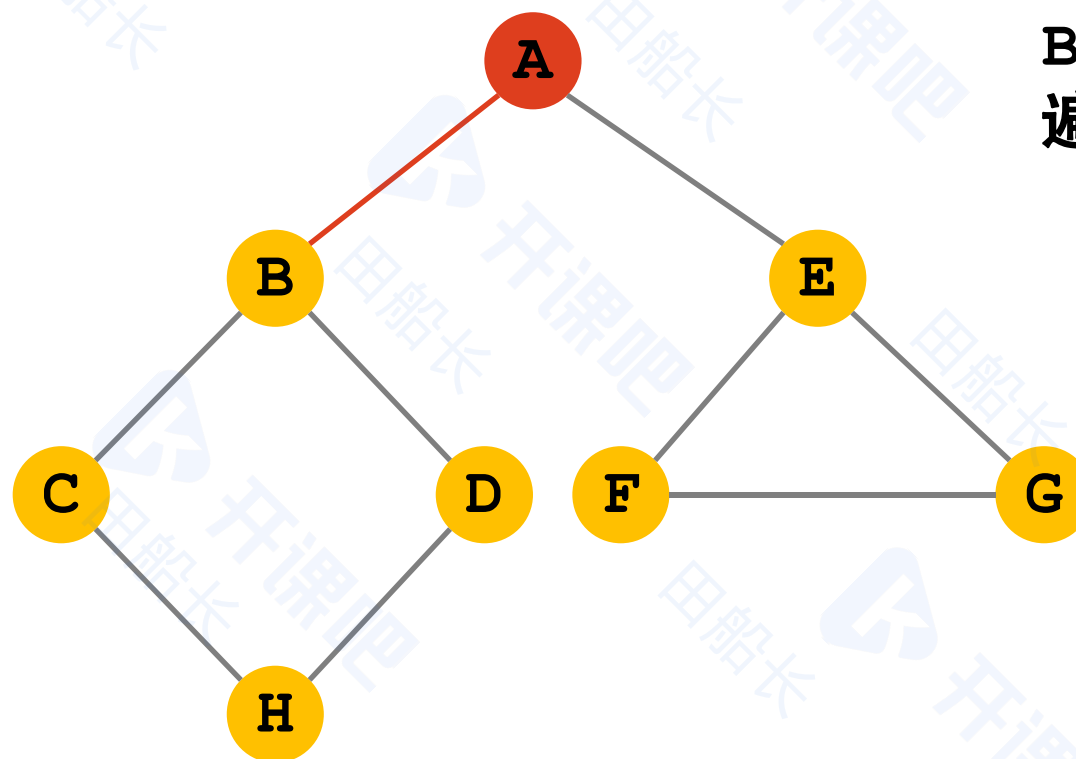


判断B是否被访问过

遍历序列: A

# 深度优先遍历

A

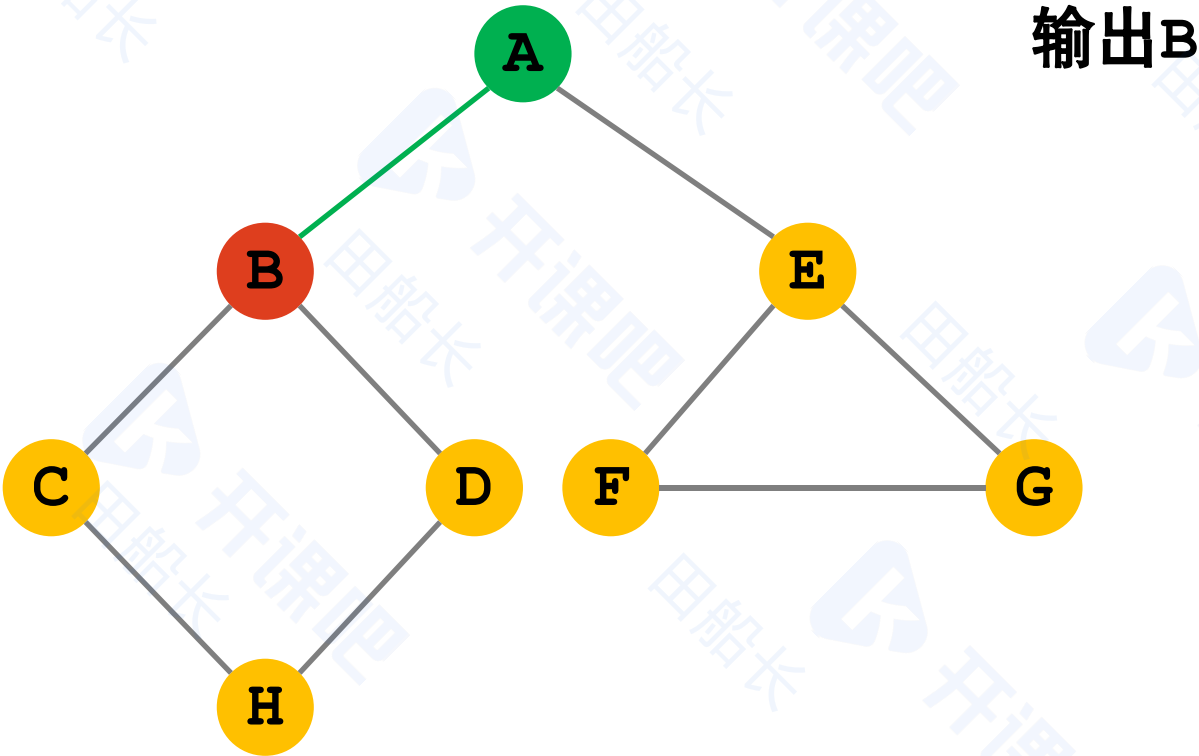


B未被访问过, 深度优先遍历B

遍历序列: A

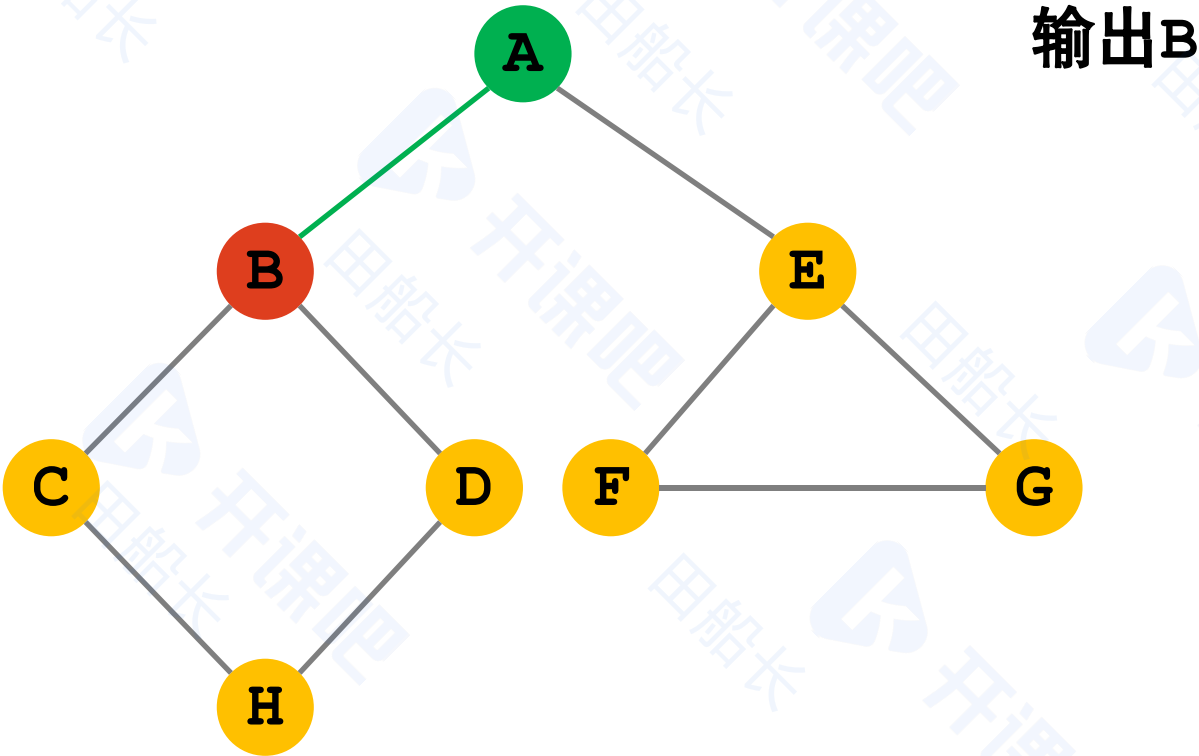


# 深度优先遍历



遍历序列：A B

# 深度优先遍历

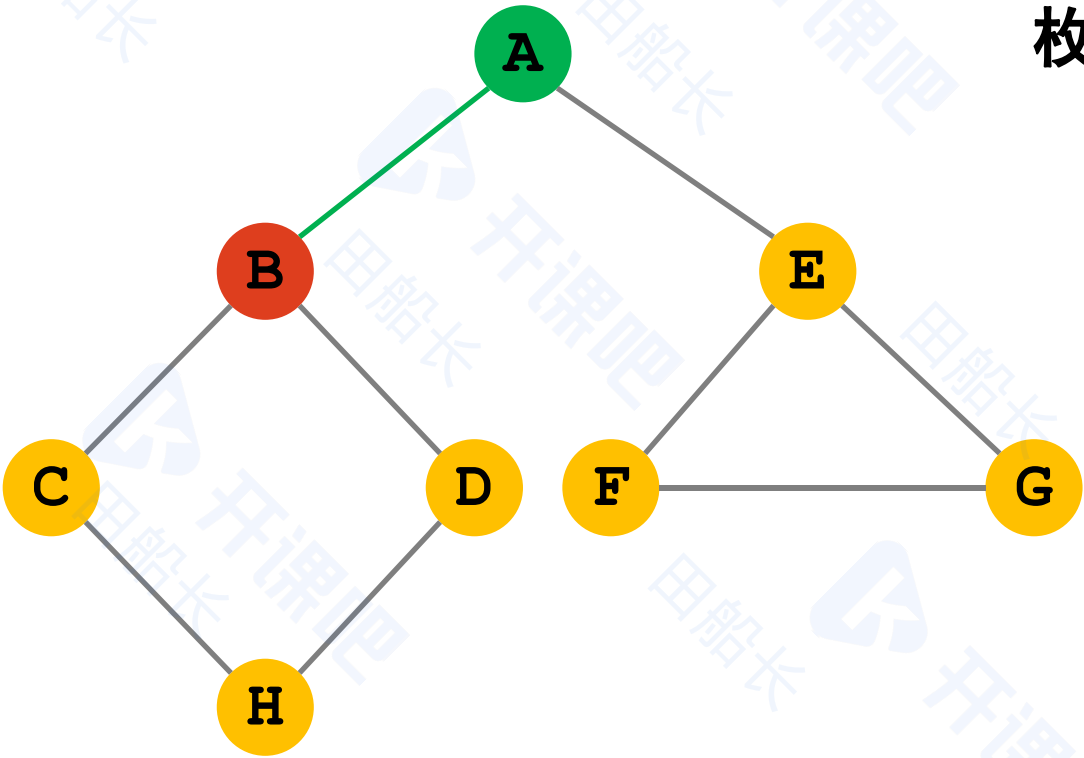


遍历序列：A B

# 深度优先遍历

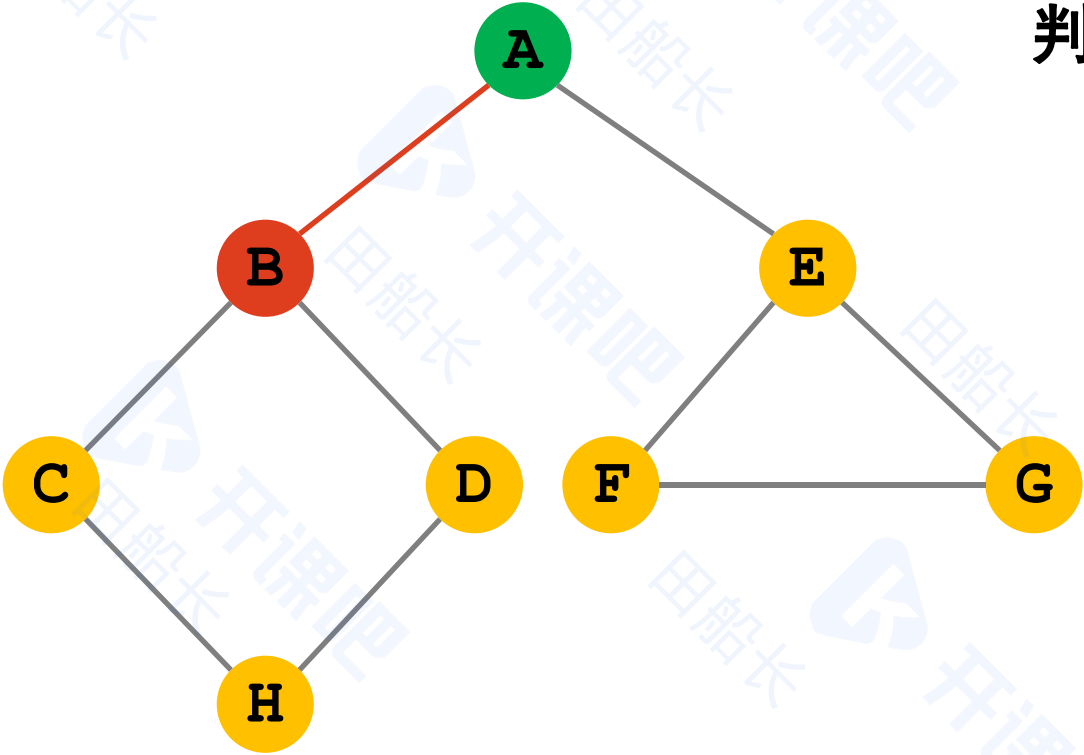


枚举B的相邻结点



遍历序列：A B

# 深度优先遍历



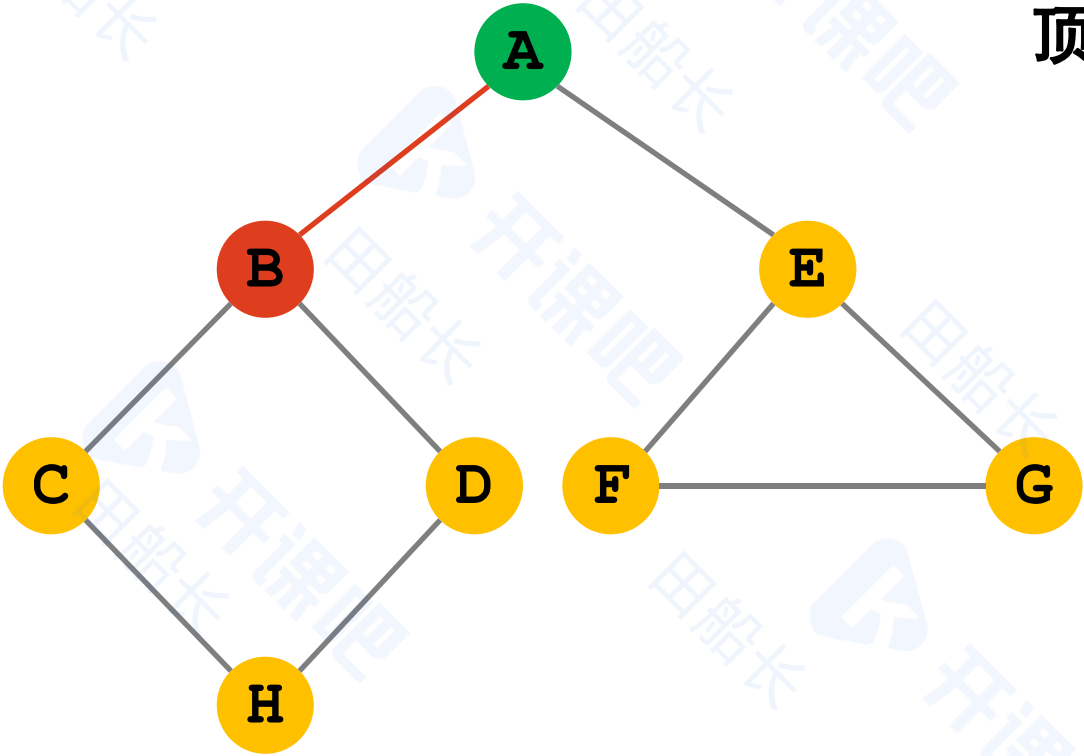
判断A是否被访问过

遍历序列：A B

# 深度优先遍历

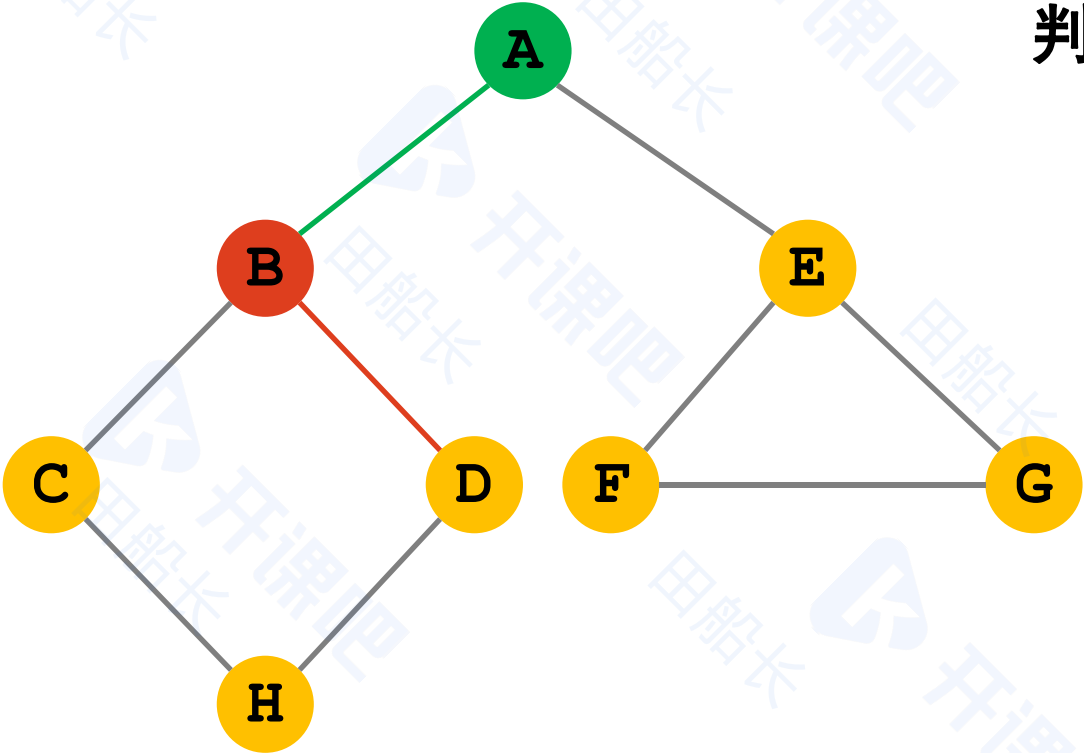


顶点A已被访问过



遍历序列：A B

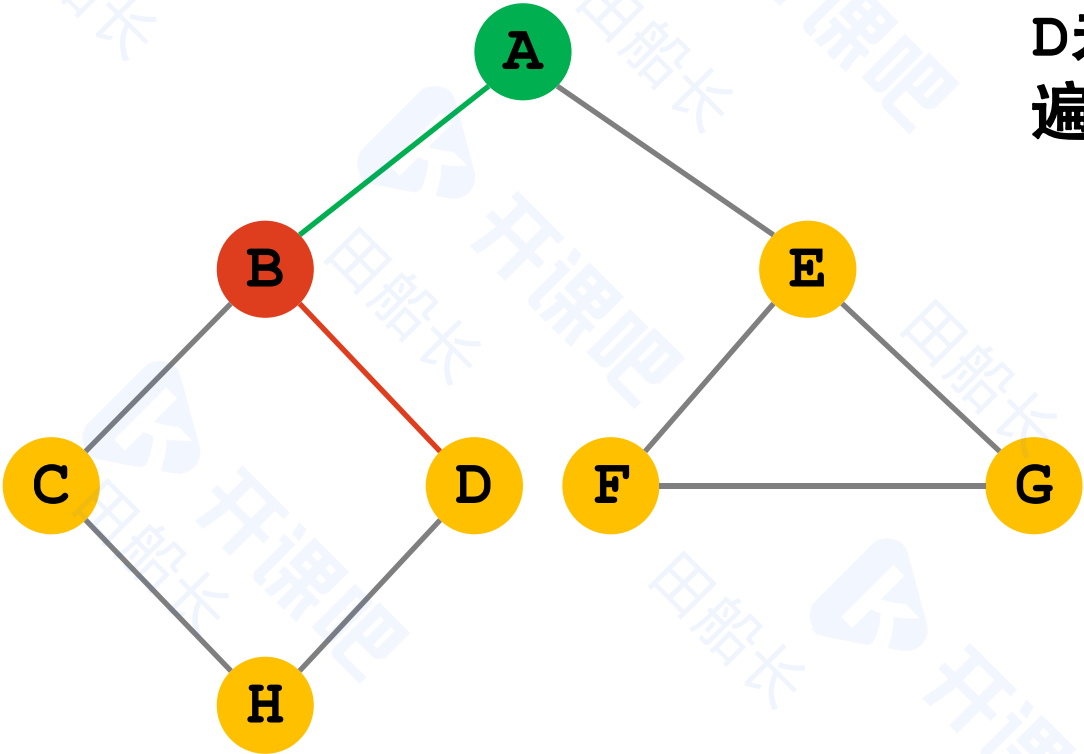
# 深度优先遍历



判断D是否被访问过

遍历序列：A B

# 深度优先遍历



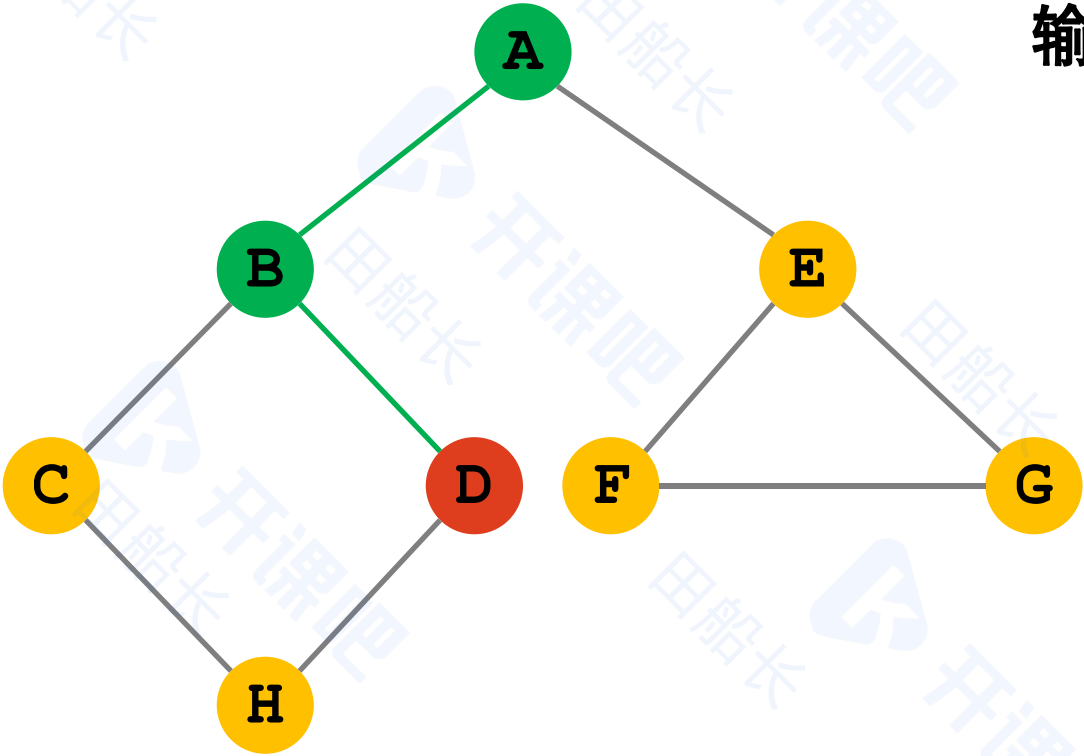
D未被访问过，深度优先遍历D

遍历序列：A B

# 深度优先遍历



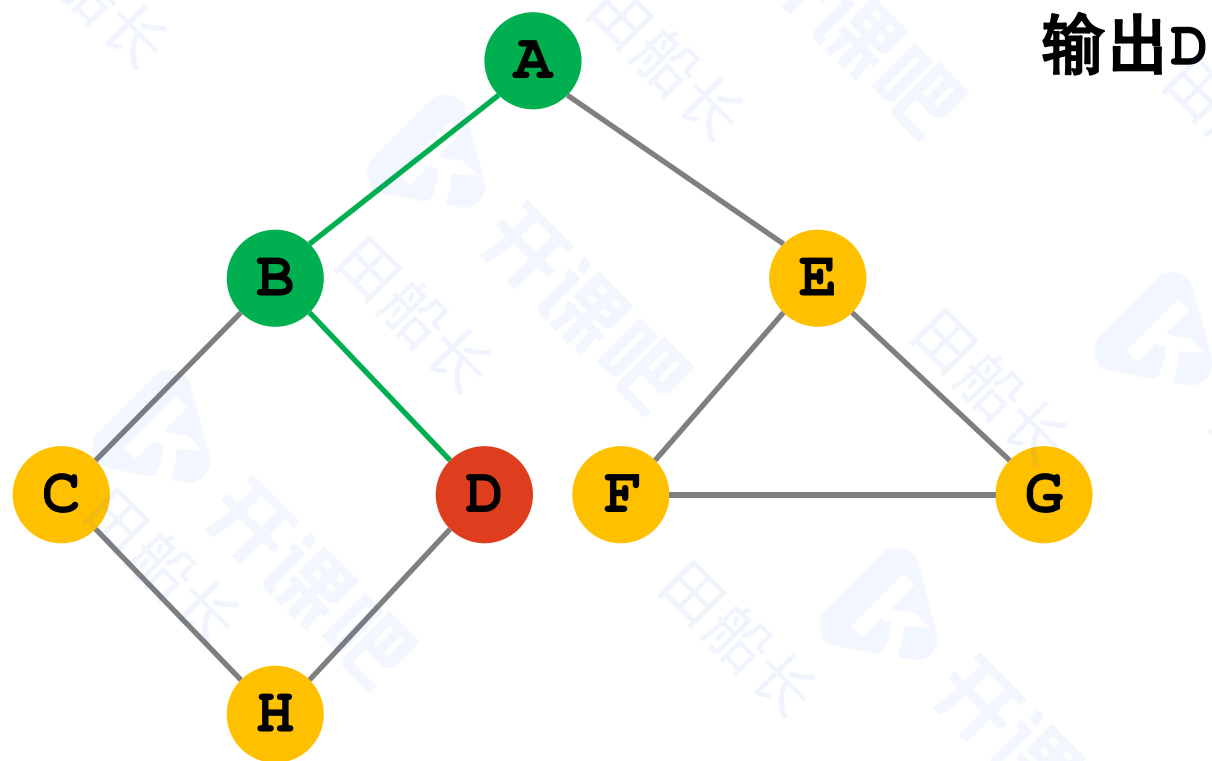
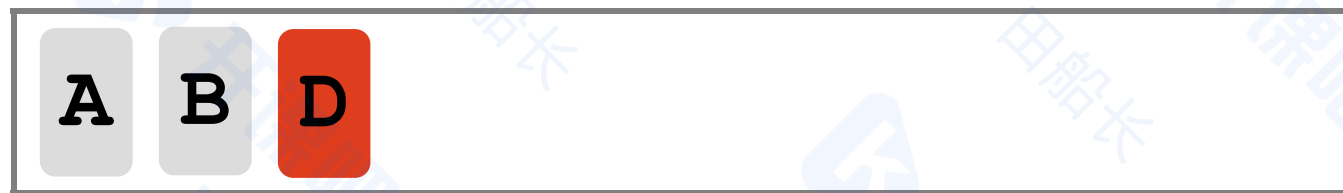
输出D



遍历序列：A B D

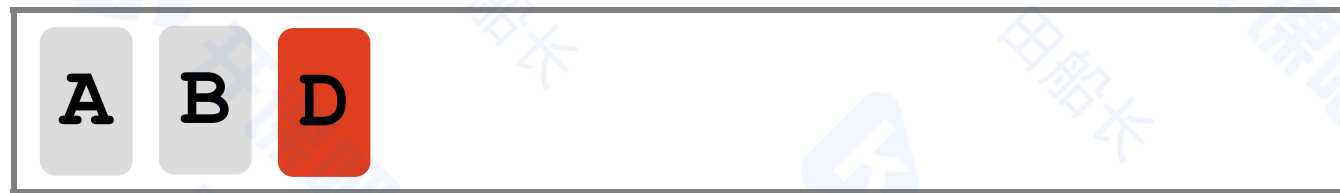


# 深度优先遍历

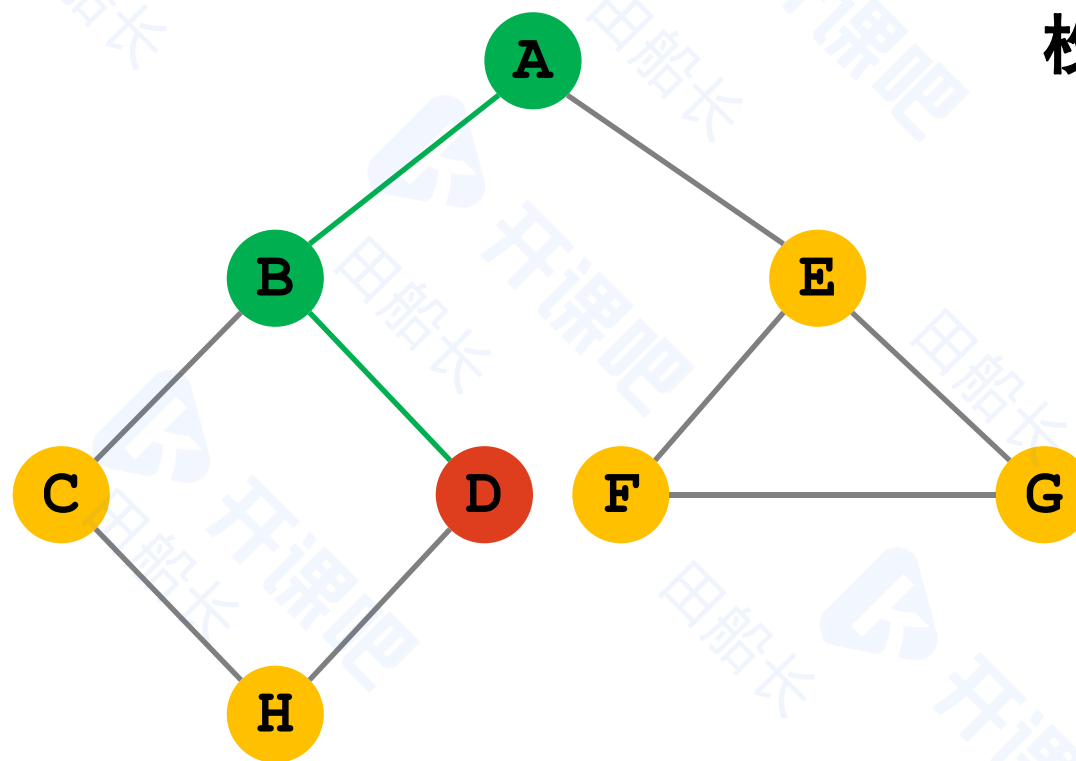


遍历序列: A B D

# 深度优先遍历



枚举D的相邻顶点

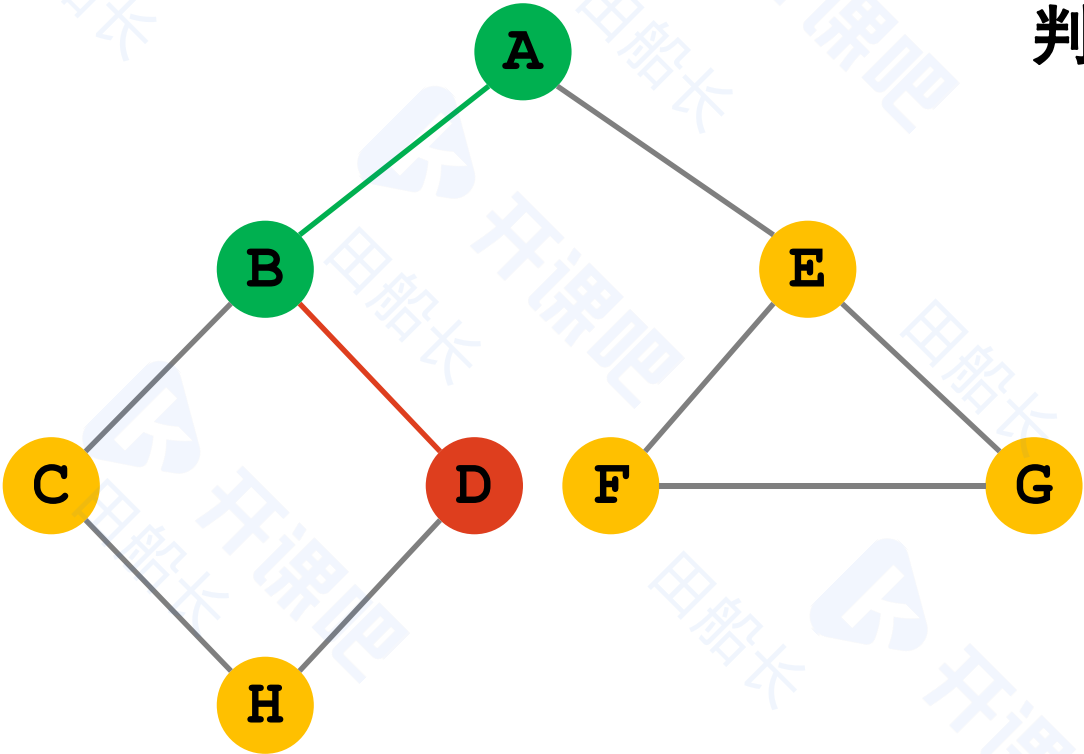


遍历序列: A B D

# 深度优先遍历



判断B是否被访问过

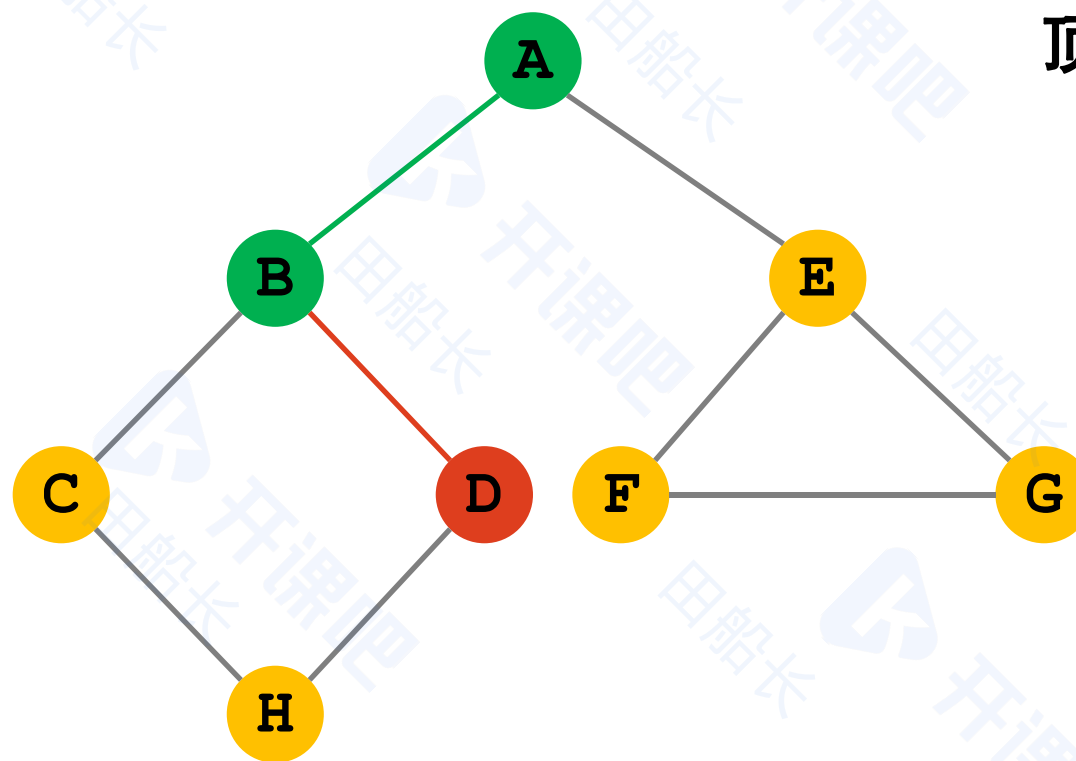


遍历序列：A B D

# 深度优先遍历

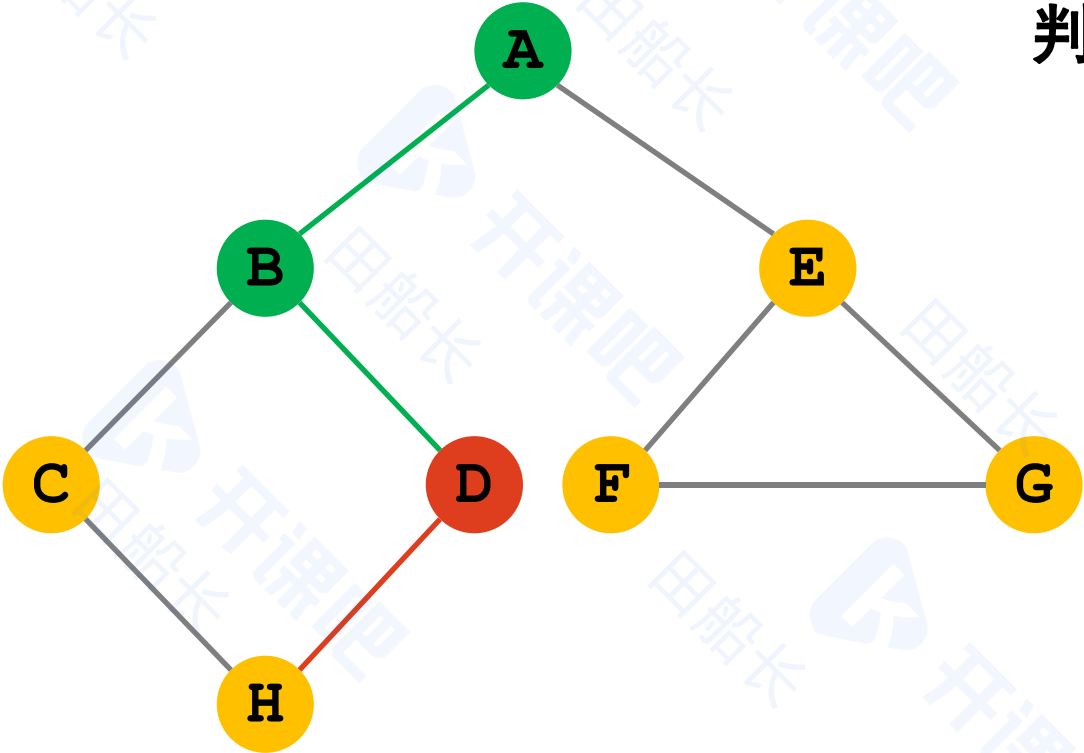


顶点B已被访问过



遍历序列: A B D

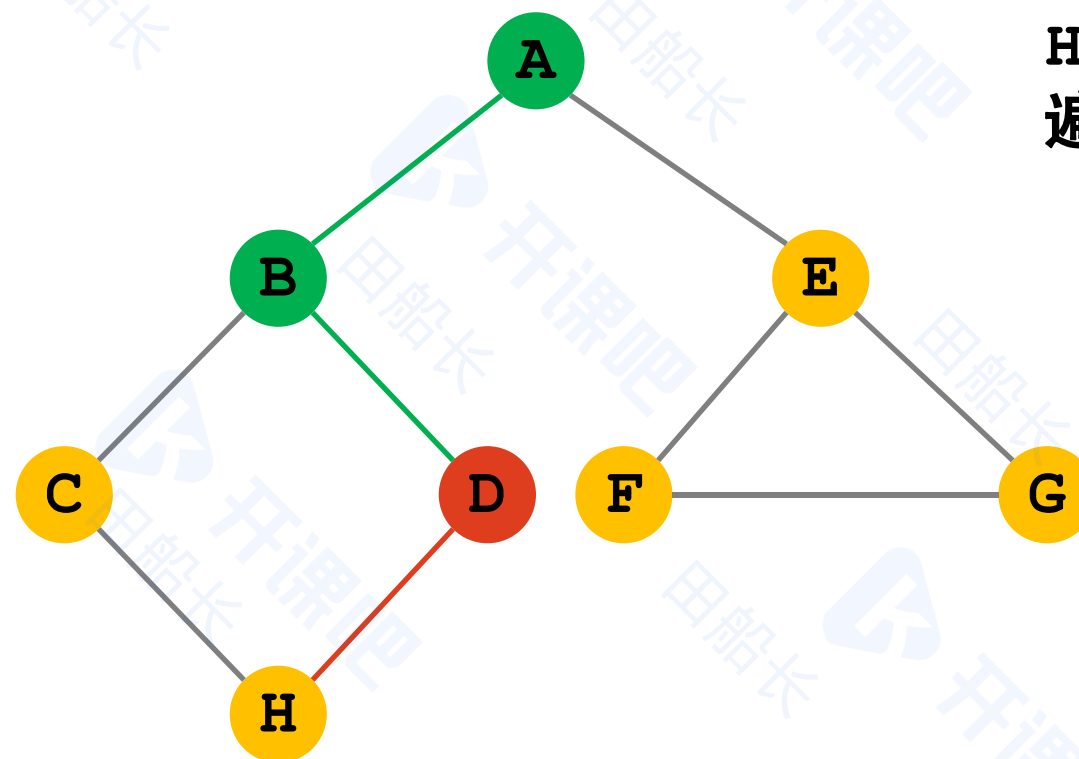
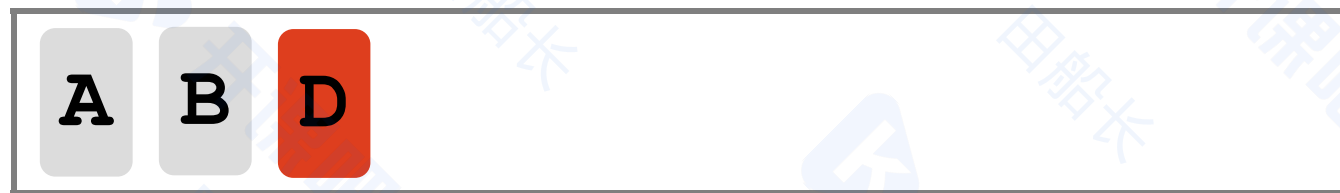
# 深度优先遍历



判断H是否被访问过

遍历序列：A B D

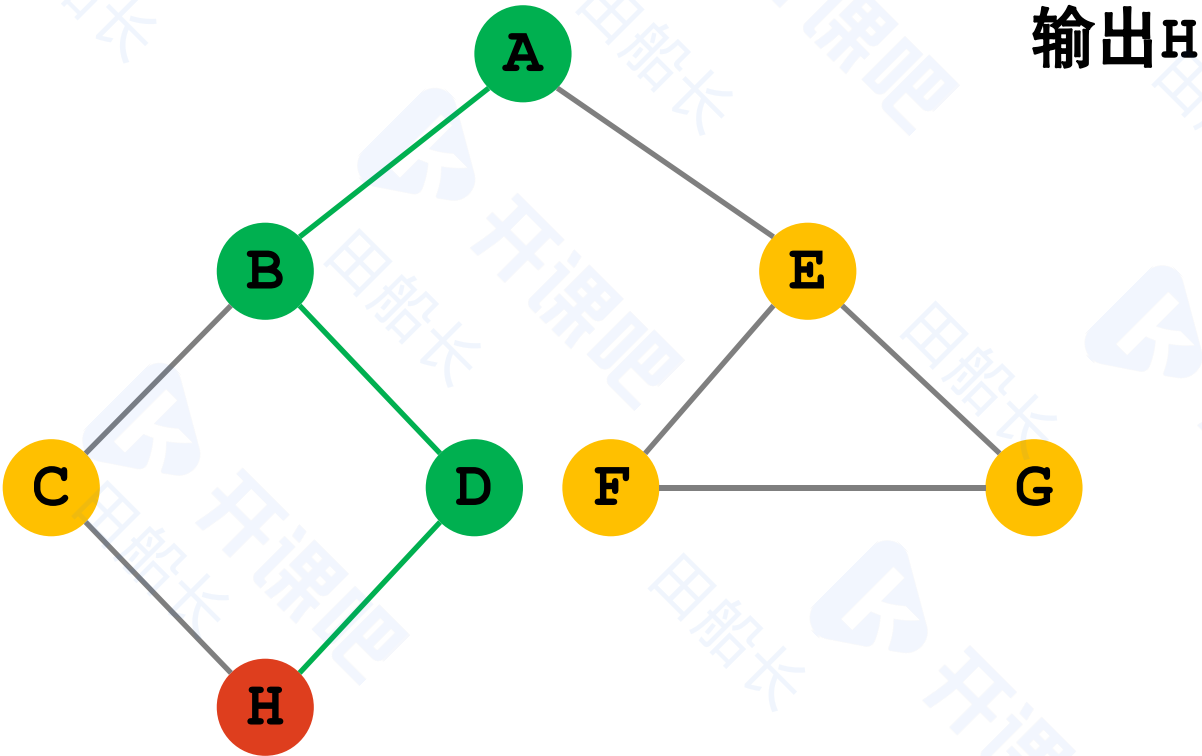
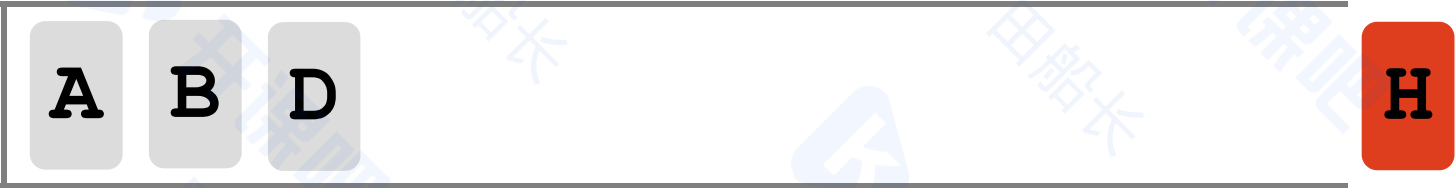
# 深度优先遍历



H未被访问过, 深度优先遍历H

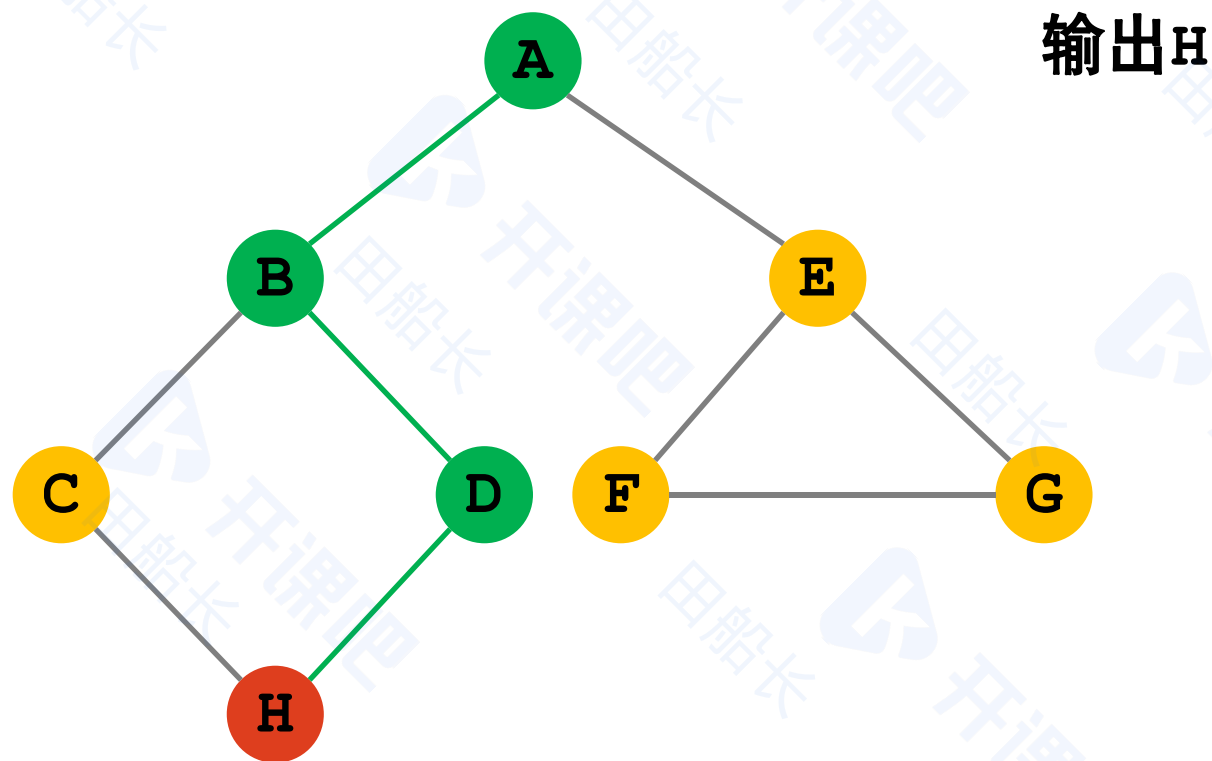
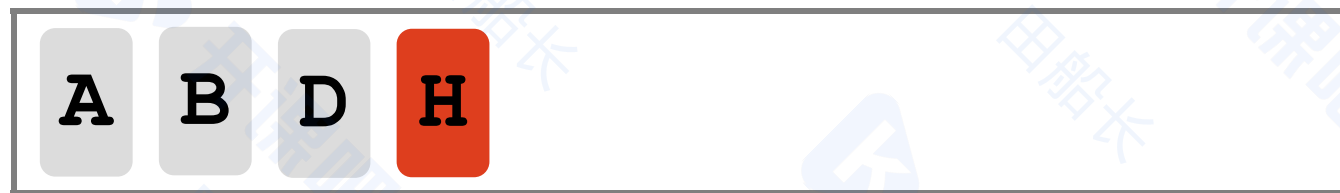
遍历序列: A B D

# 深度优先遍历



遍历序列: A B D H

# 深度优先遍历



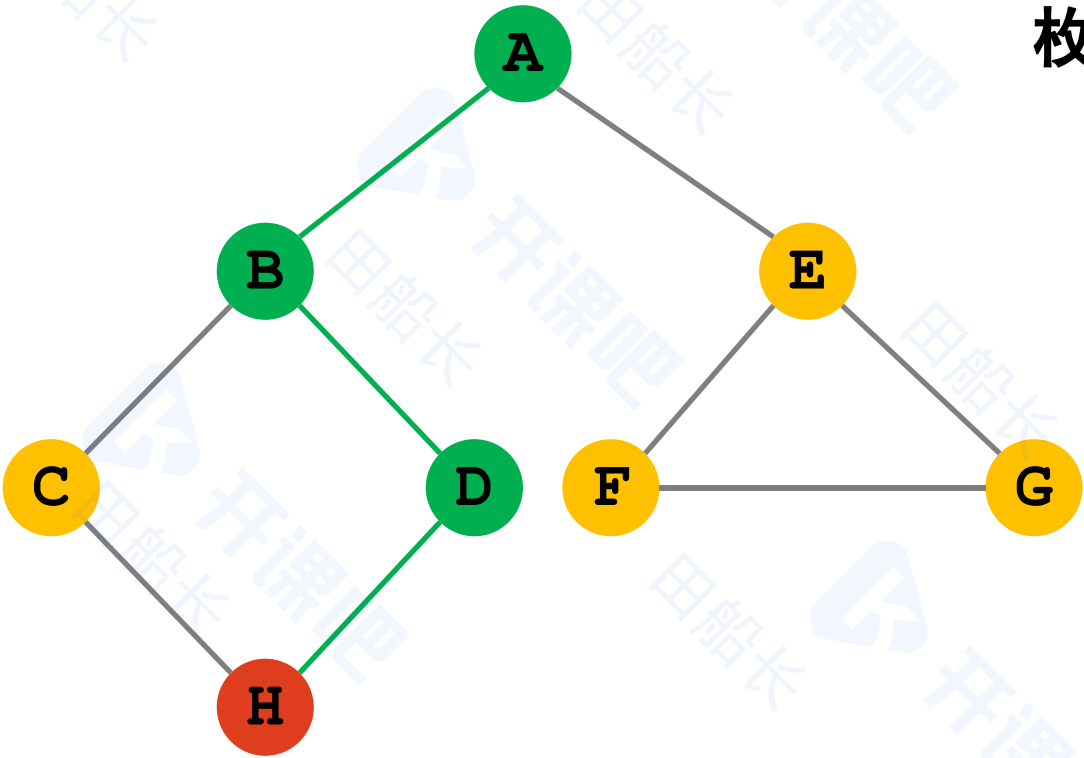
遍历序列: A B D H



# 深度优先遍历



枚举H的相邻结点

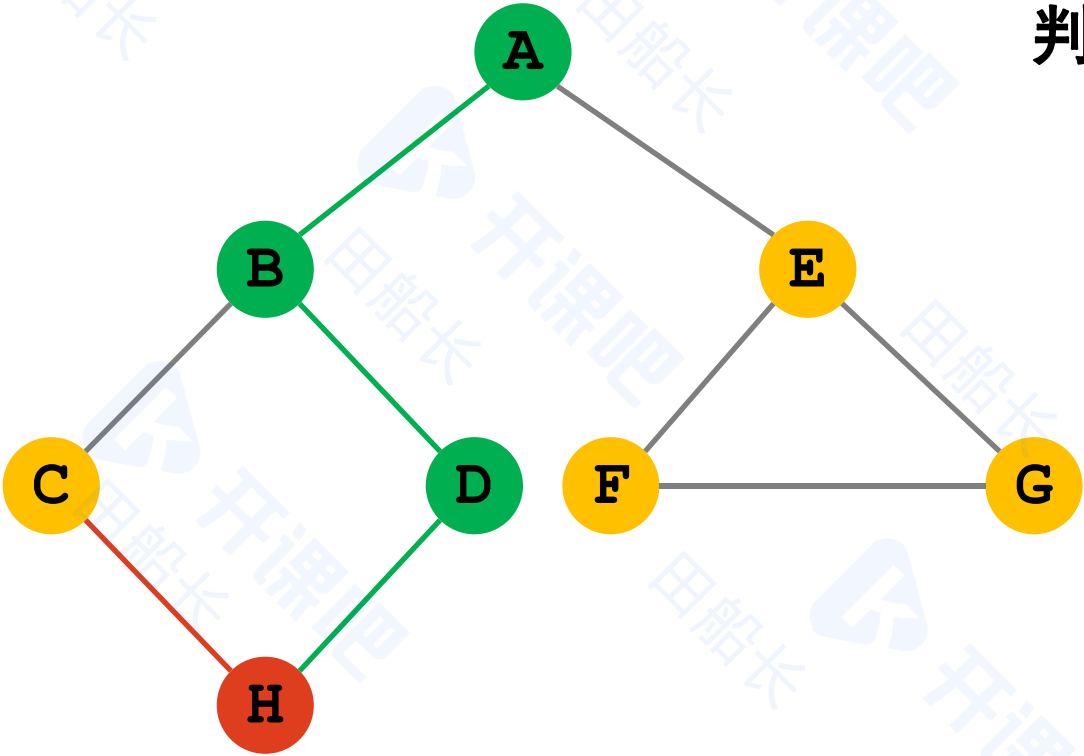


遍历序列：A B D H

# 深度优先遍历

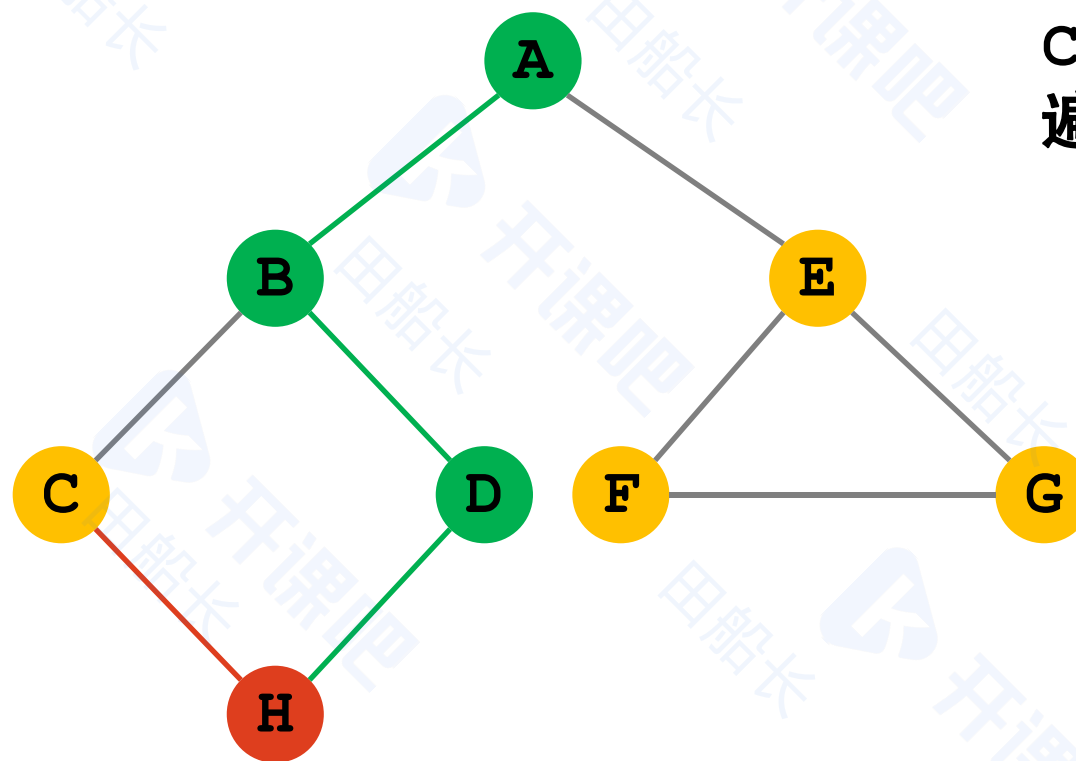
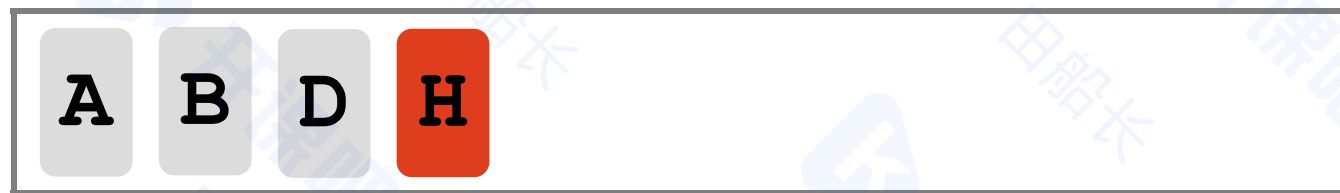


判断C是否被访问过



遍历序列：A B D H

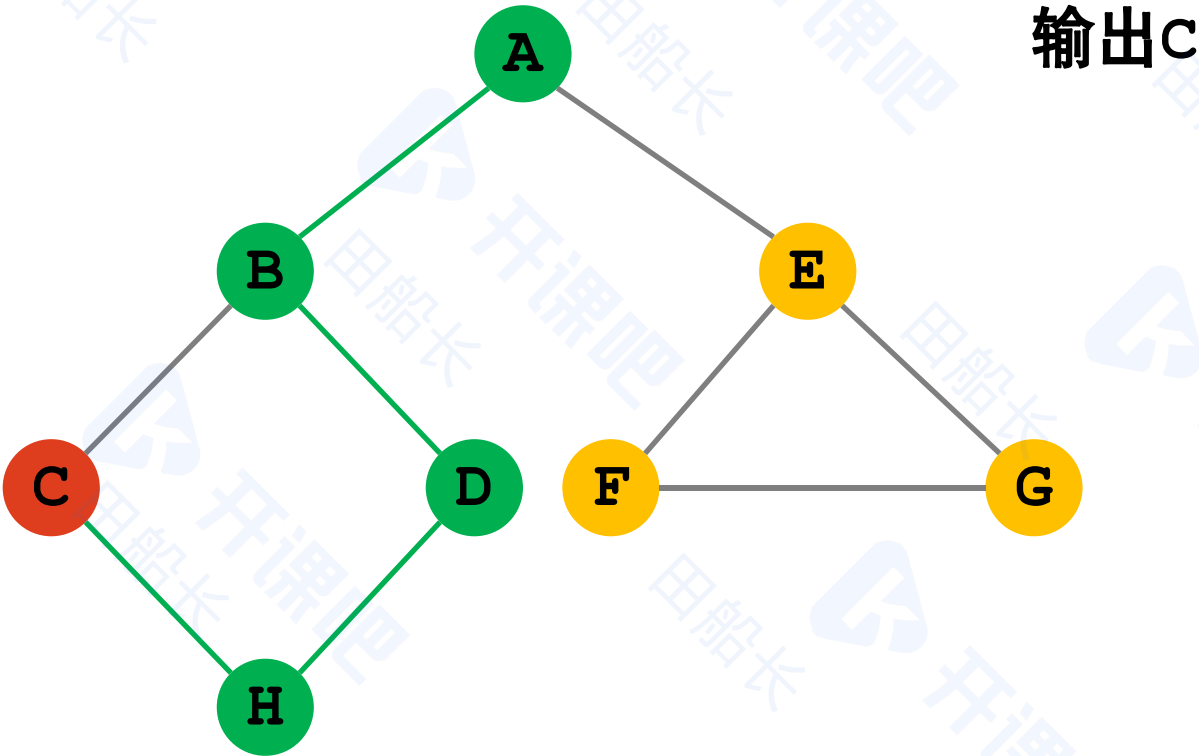
# 深度优先遍历



C未被访问过, 深度优先遍历C

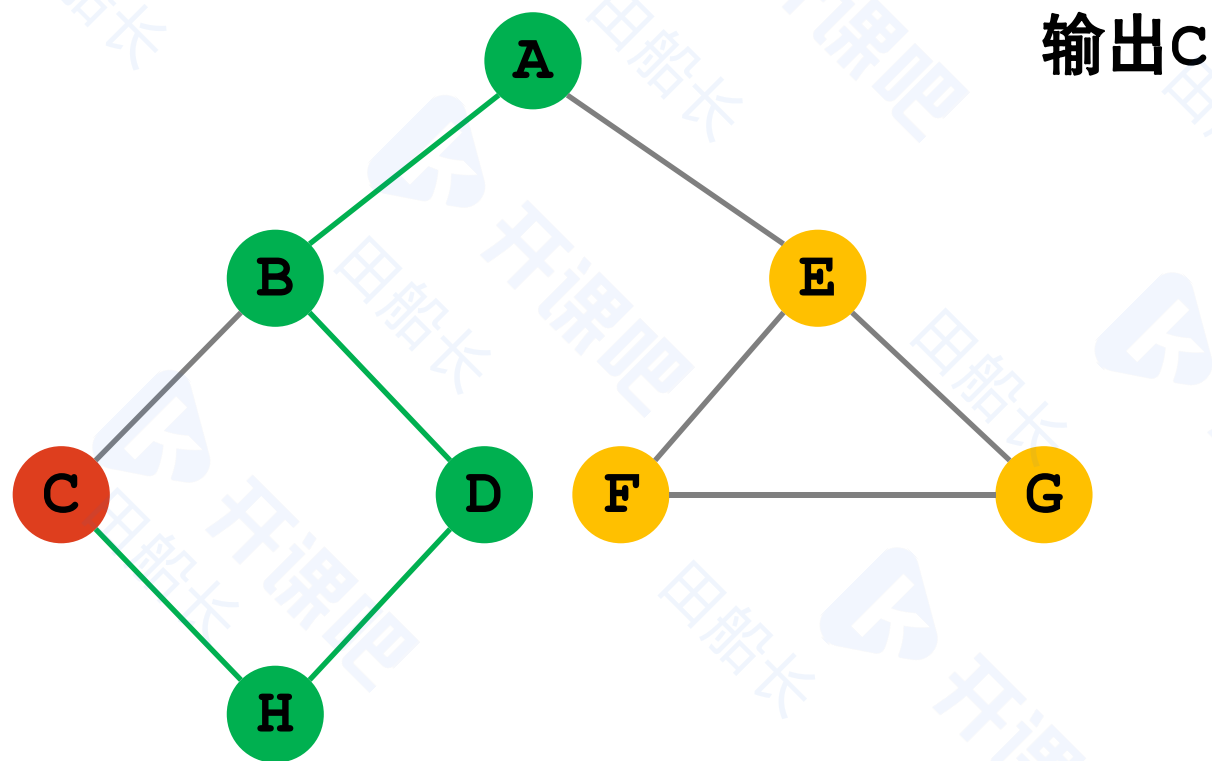
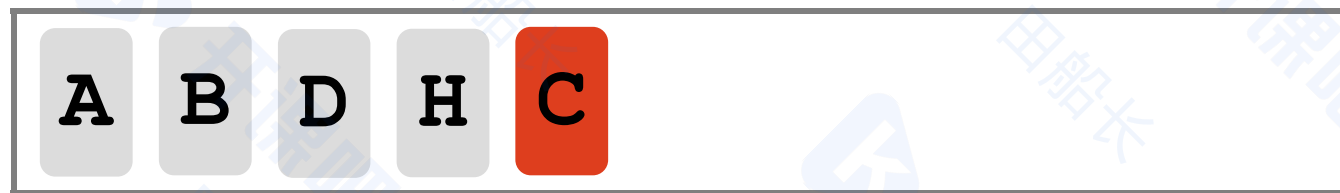
遍历序列: A B D H

# 深度优先遍历



遍历序列：A B D H C

# 深度优先遍历

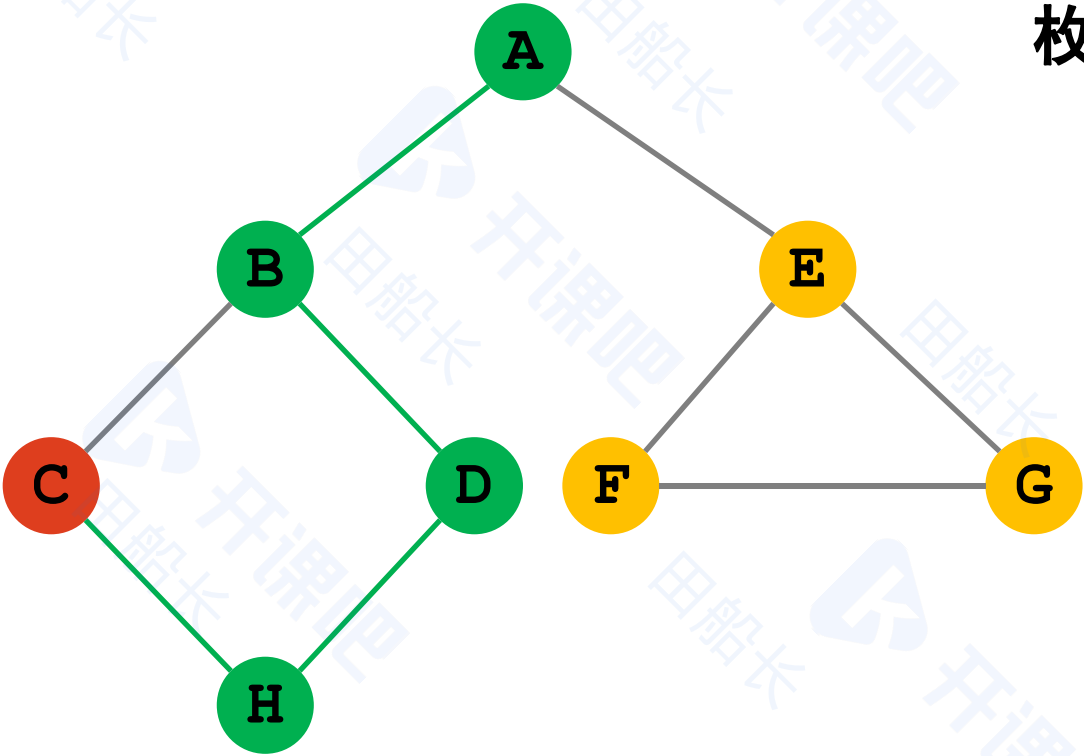


遍历序列: A B D H C

# 深度优先遍历



枚举C的相邻结点

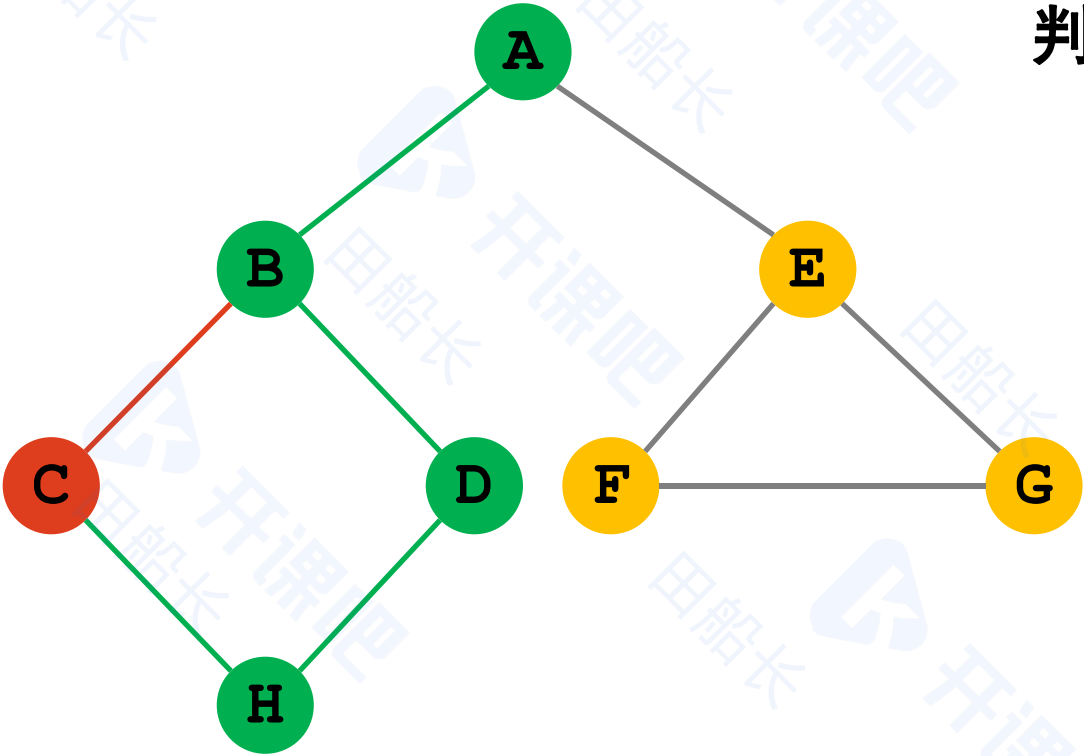


遍历序列：A B D H C

# 深度优先遍历

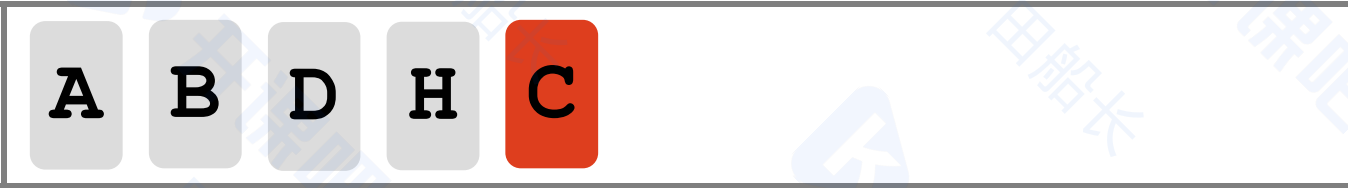


判断B是否被访问过

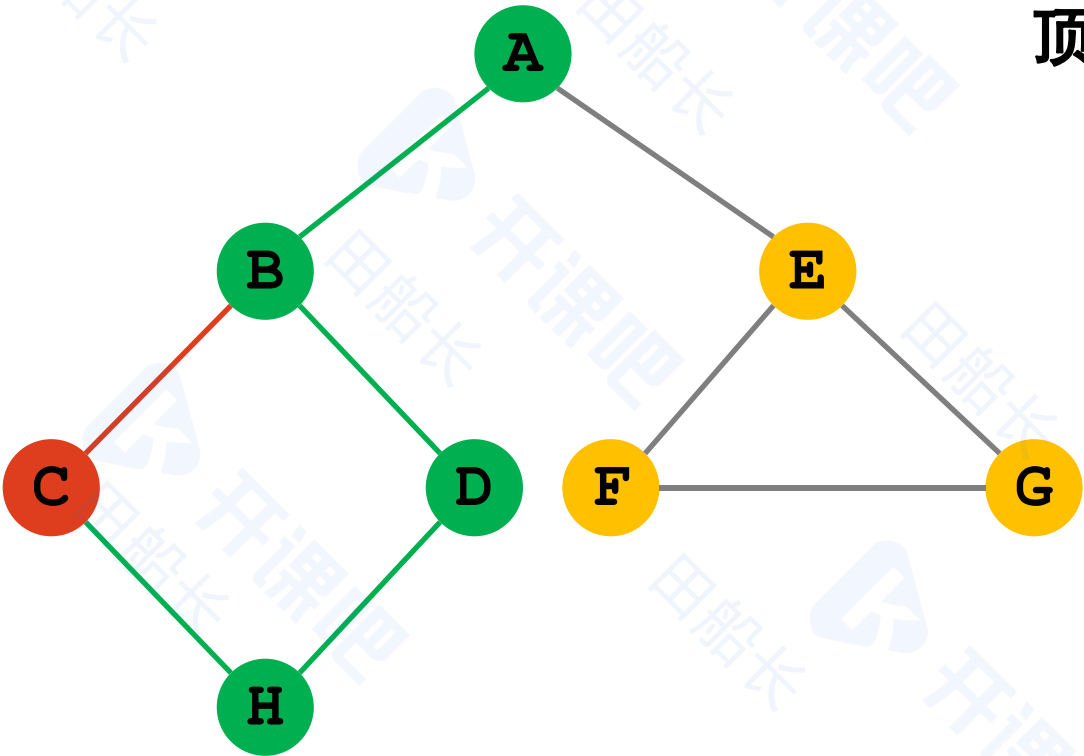


遍历序列：A B D H C

# 深度优先遍历



顶点B已被访问过



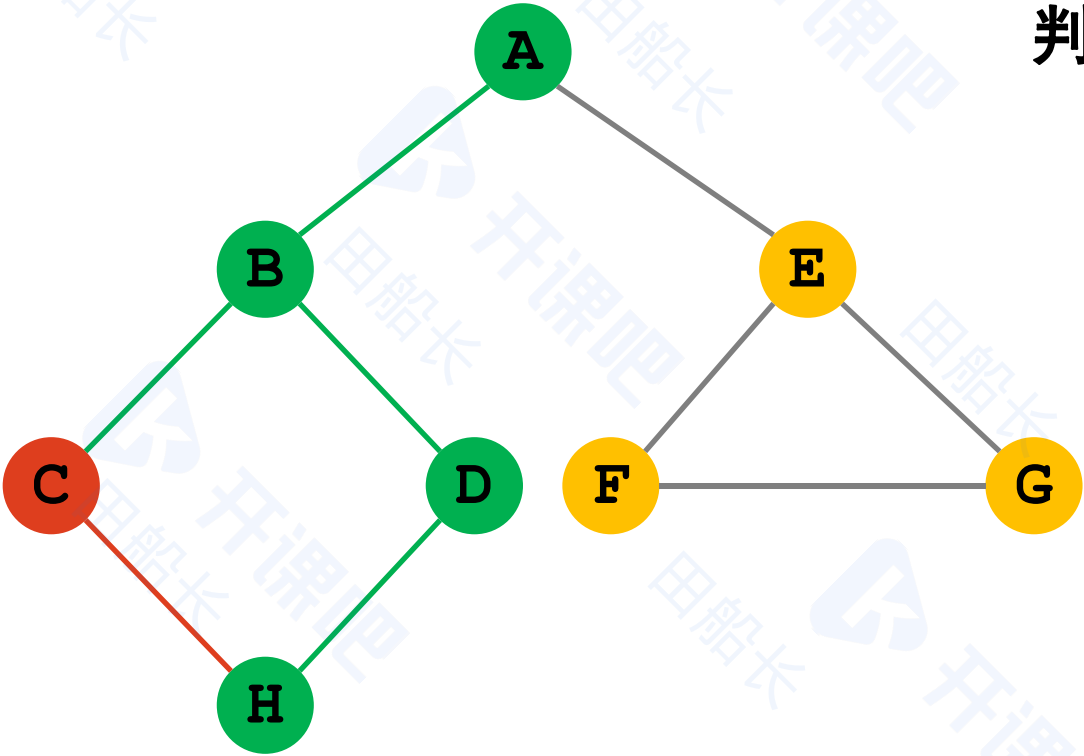
遍历序列：A B D H C



# 深度优先遍历

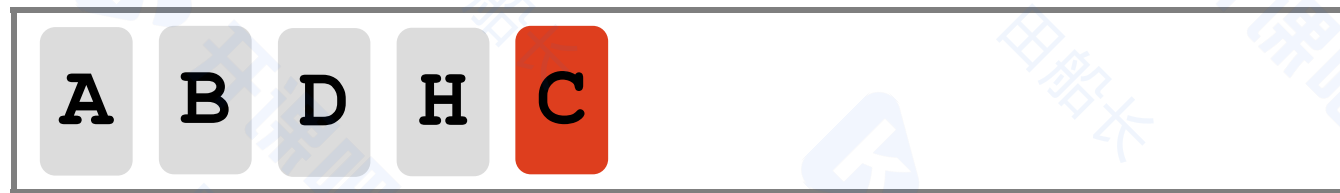


判断H是否被访问过

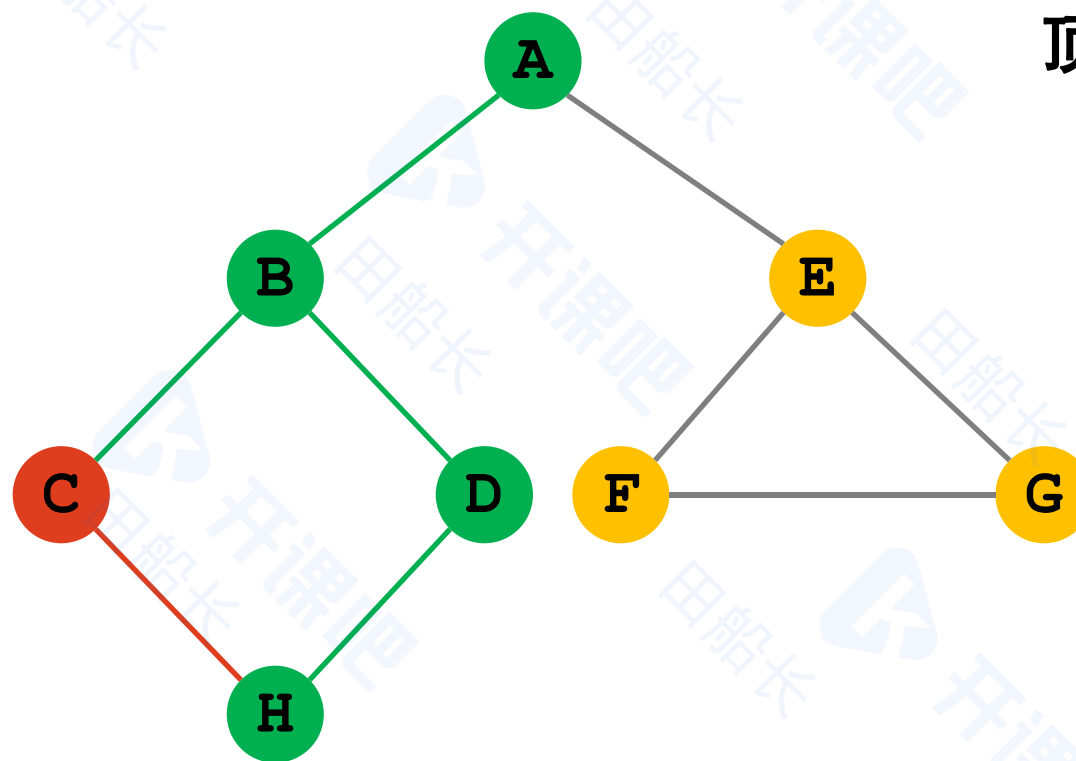


遍历序列：A B D H C

# 深度优先遍历

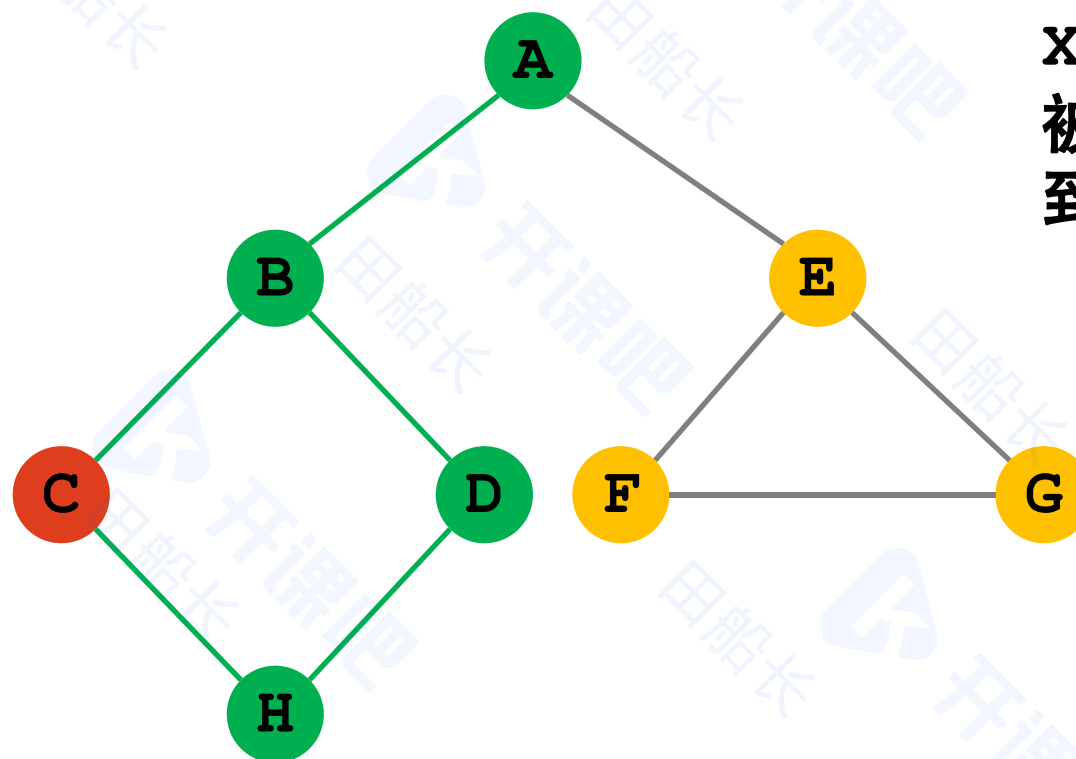
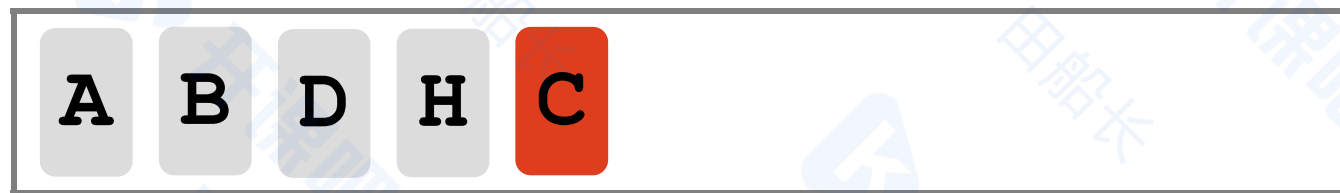


顶点H已被访问过



遍历序列: A B D H C

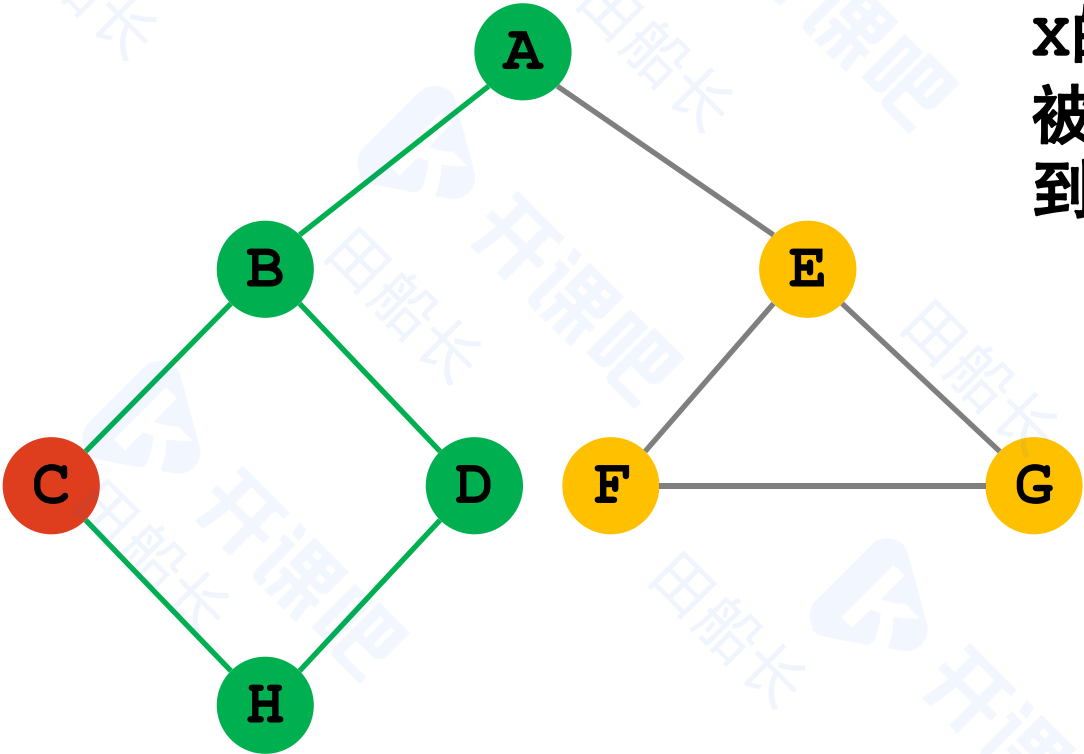
# 深度优先遍历



x的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

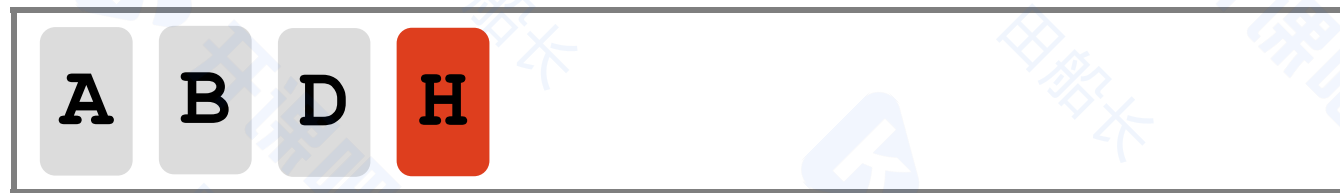
# 深度优先遍历



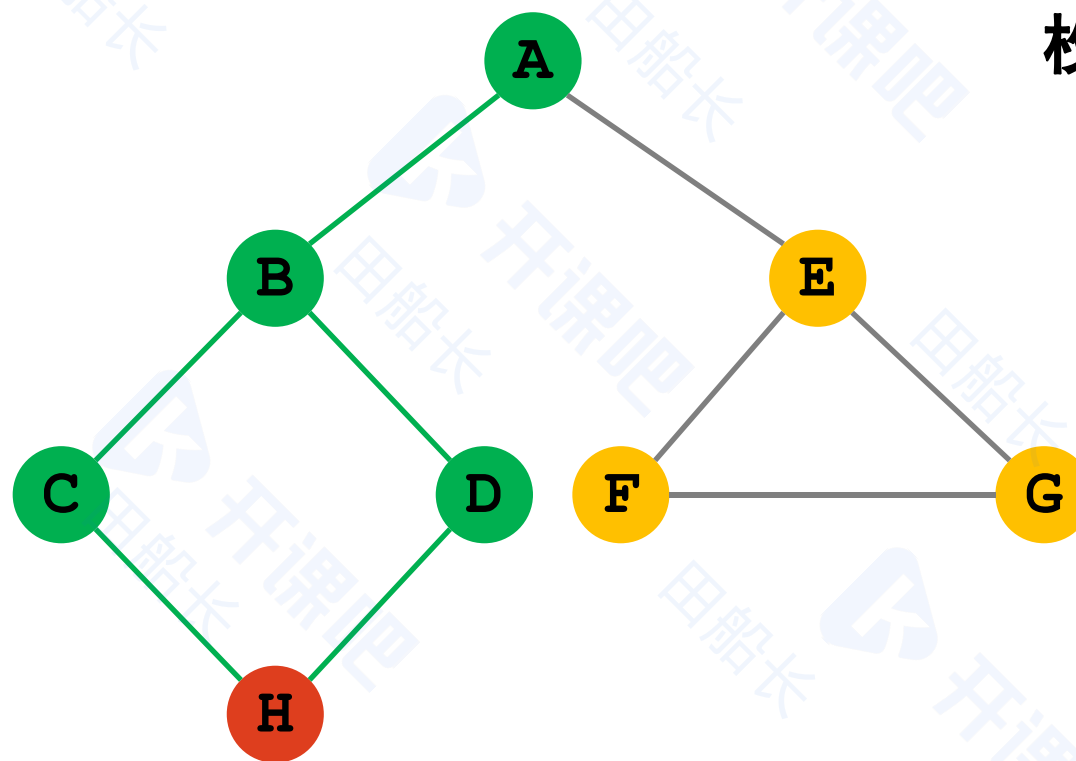
x的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

# 深度优先遍历



枚举H的相邻结点

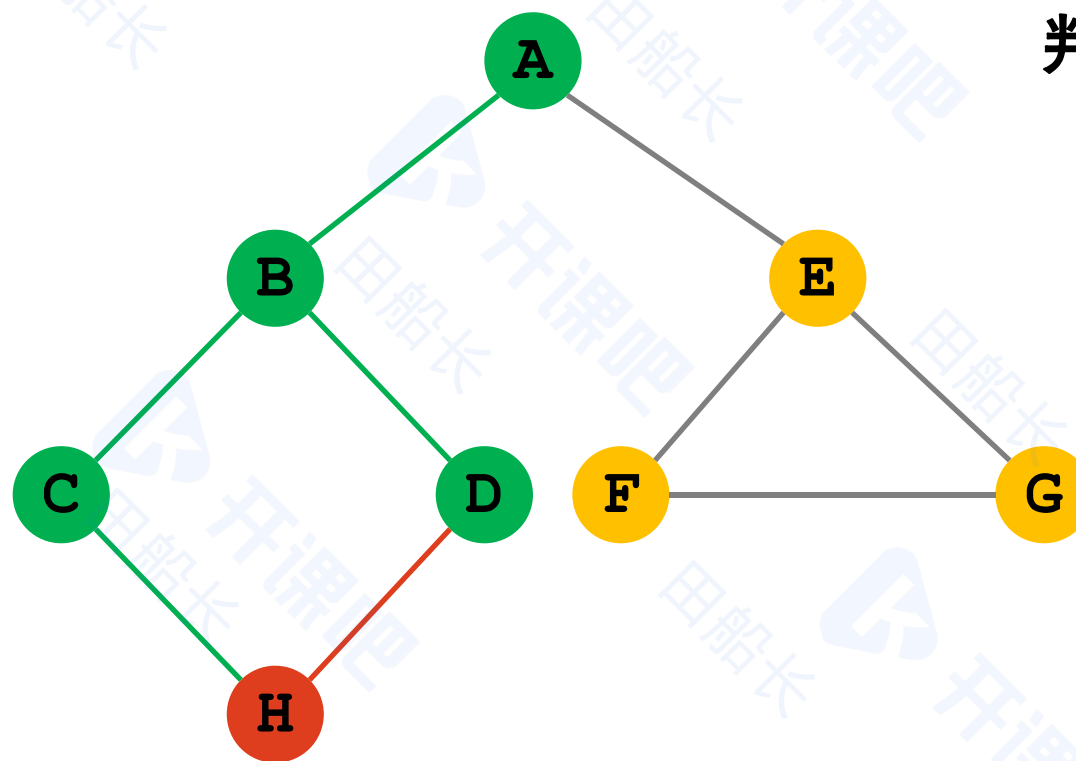


遍历序列: A B D H C

# 深度优先遍历

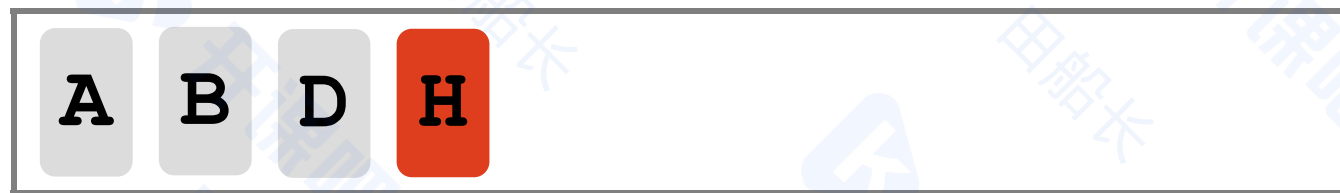


判断D是否被访问过

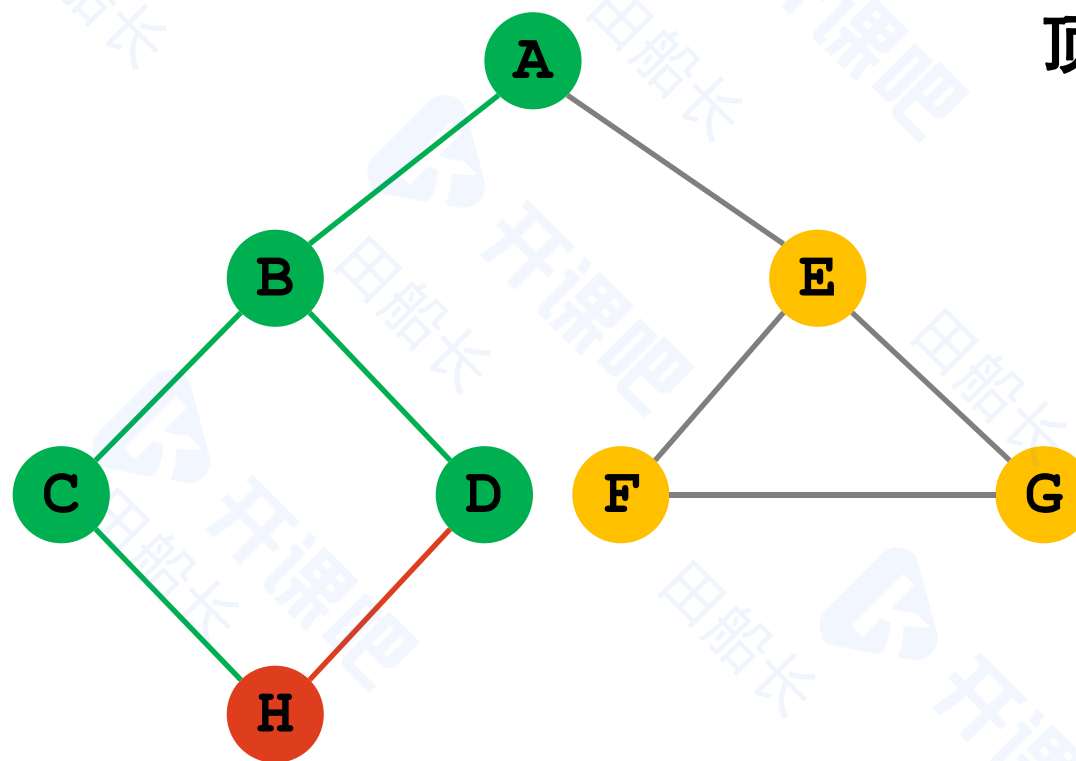


遍历序列: A B D H C

# 深度优先遍历

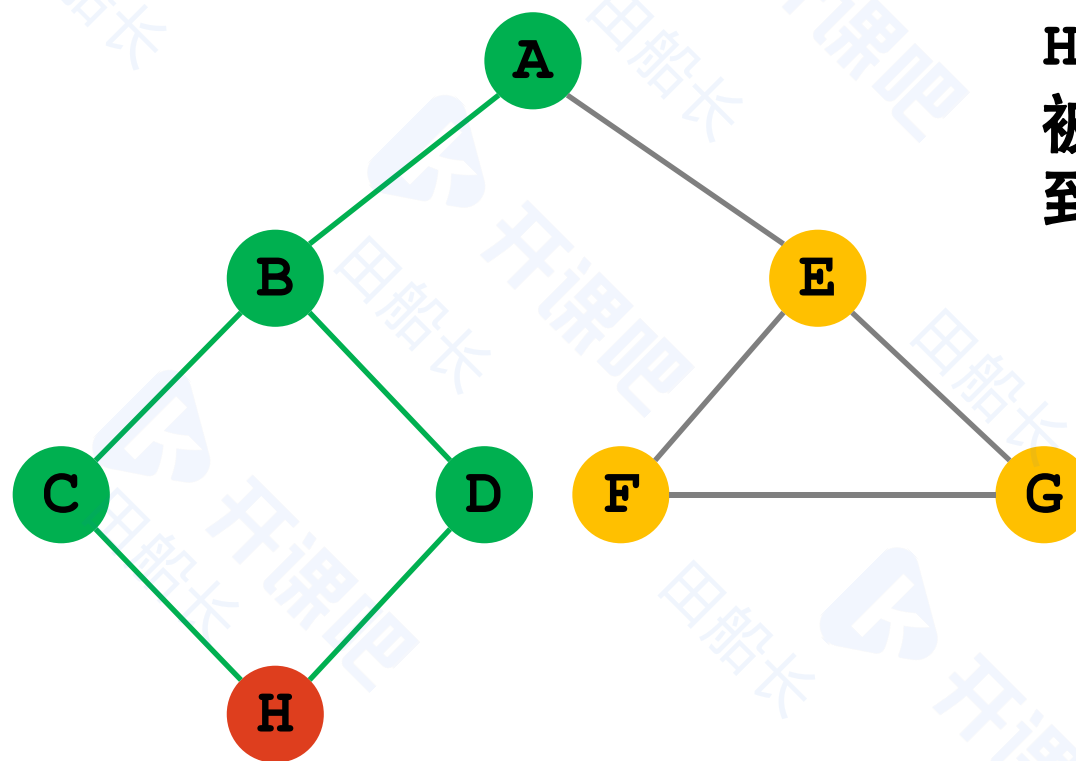
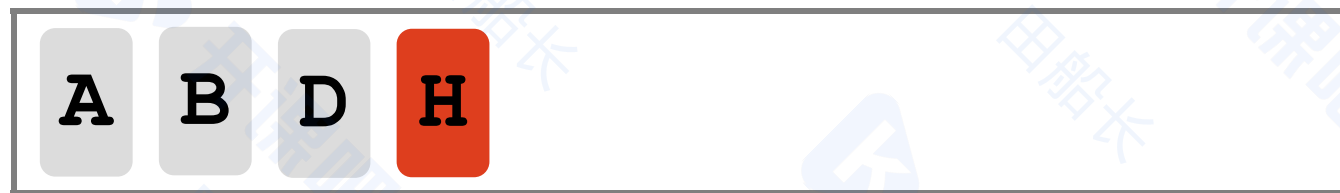


顶点D已被访问过



遍历序列: A B D H C

# 深度优先遍历

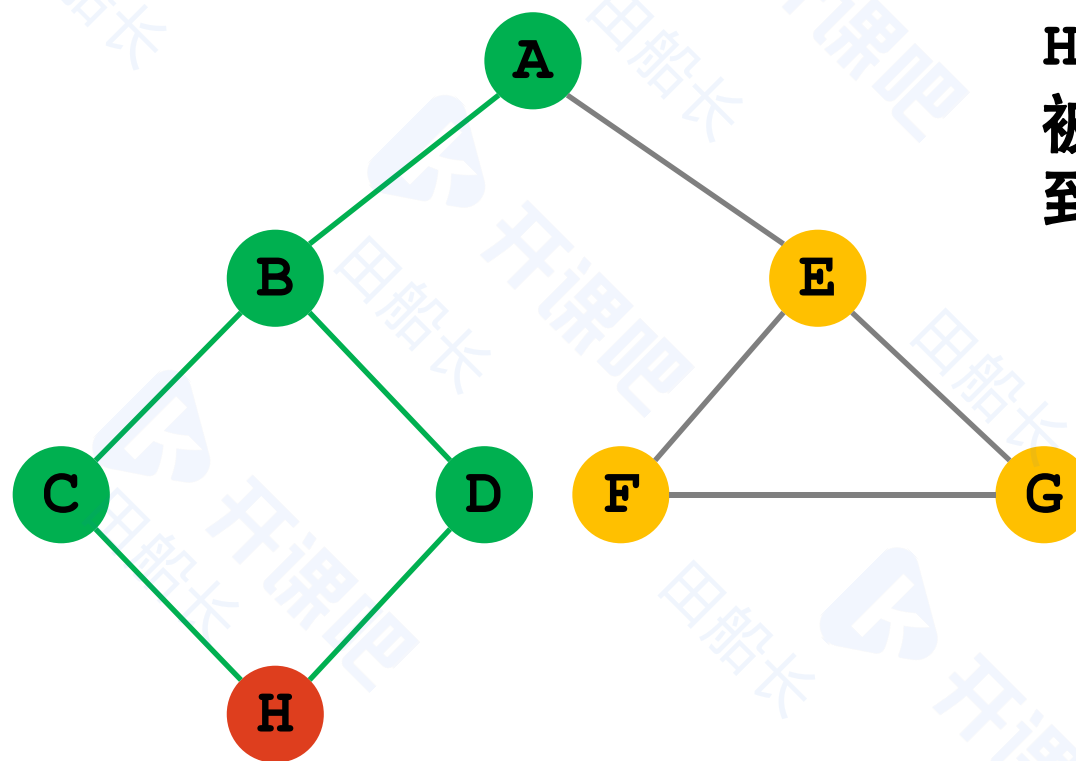
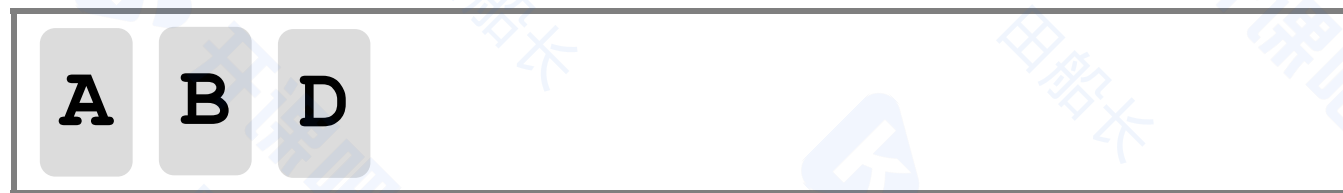


H的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C



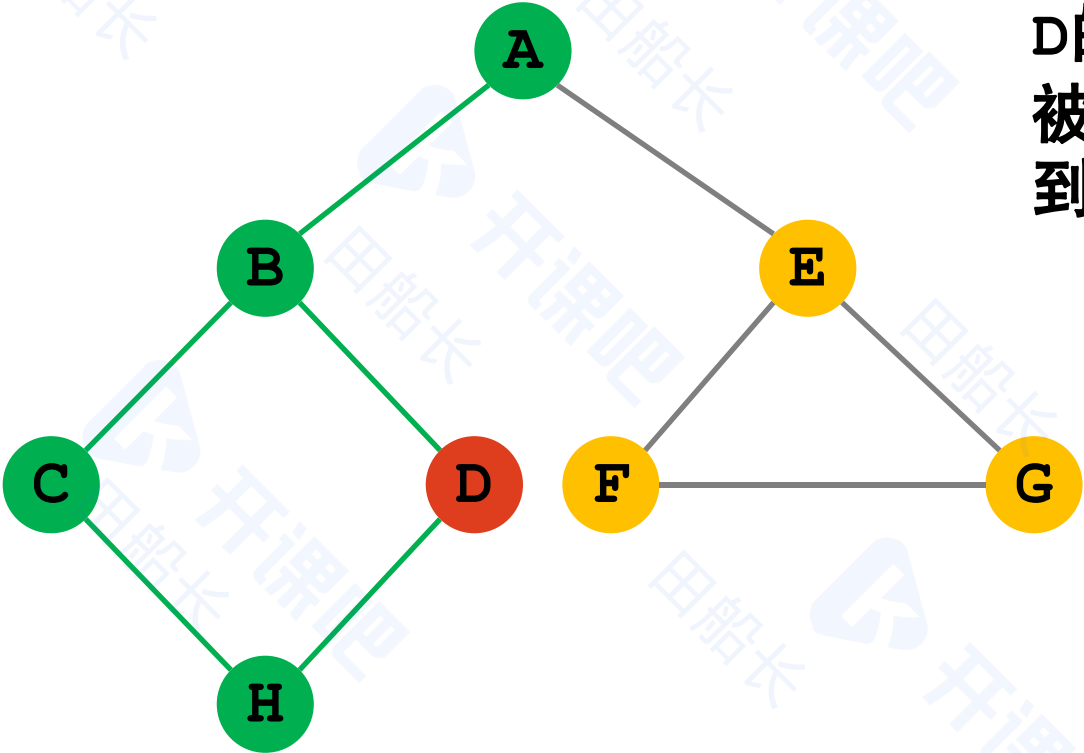
# 深度优先遍历



H的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

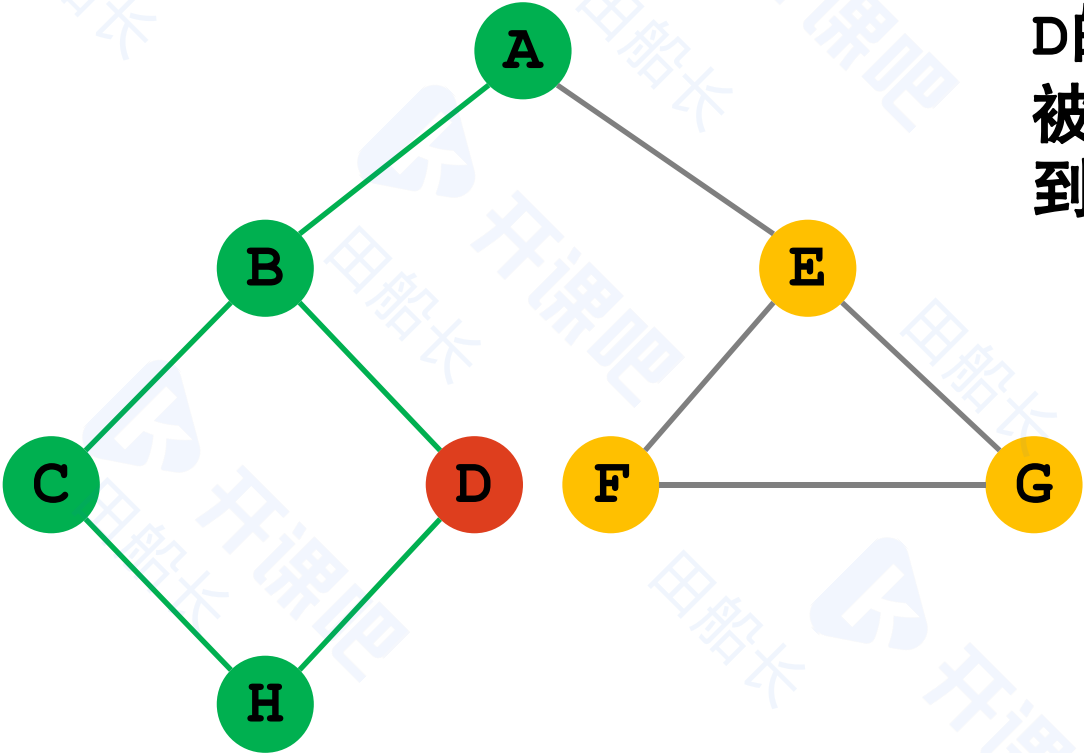
# 深度优先遍历



D的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

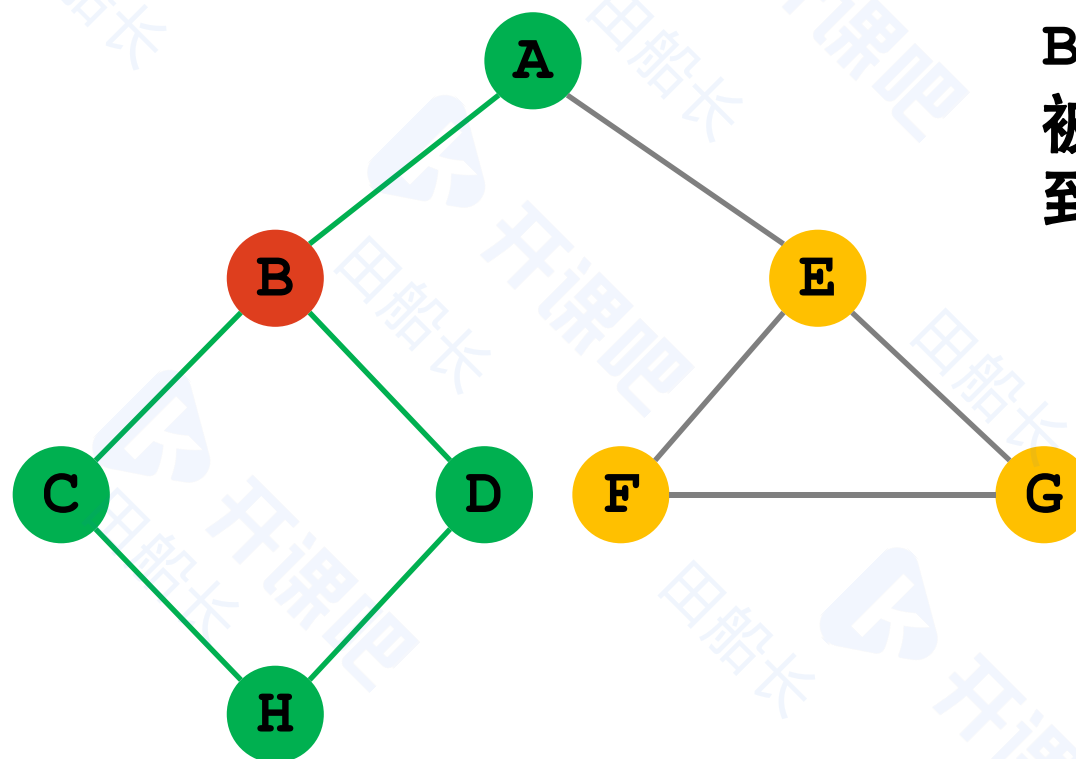
# 深度优先遍历



D的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

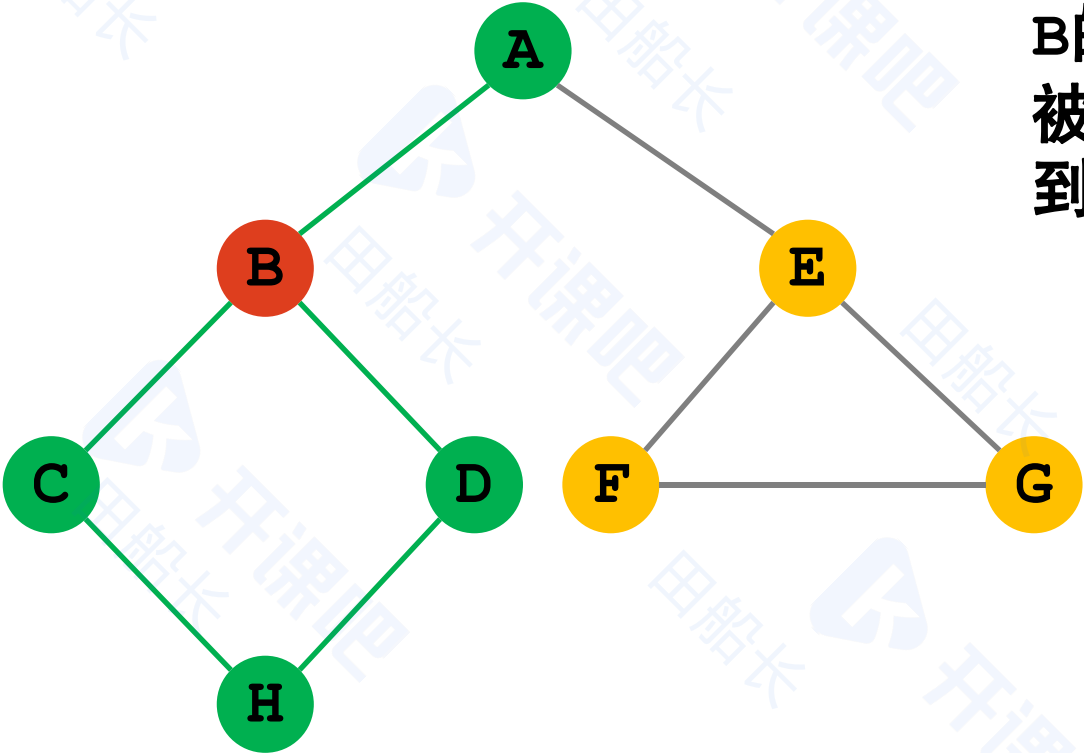
# 深度优先遍历



B的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

# 深度优先遍历



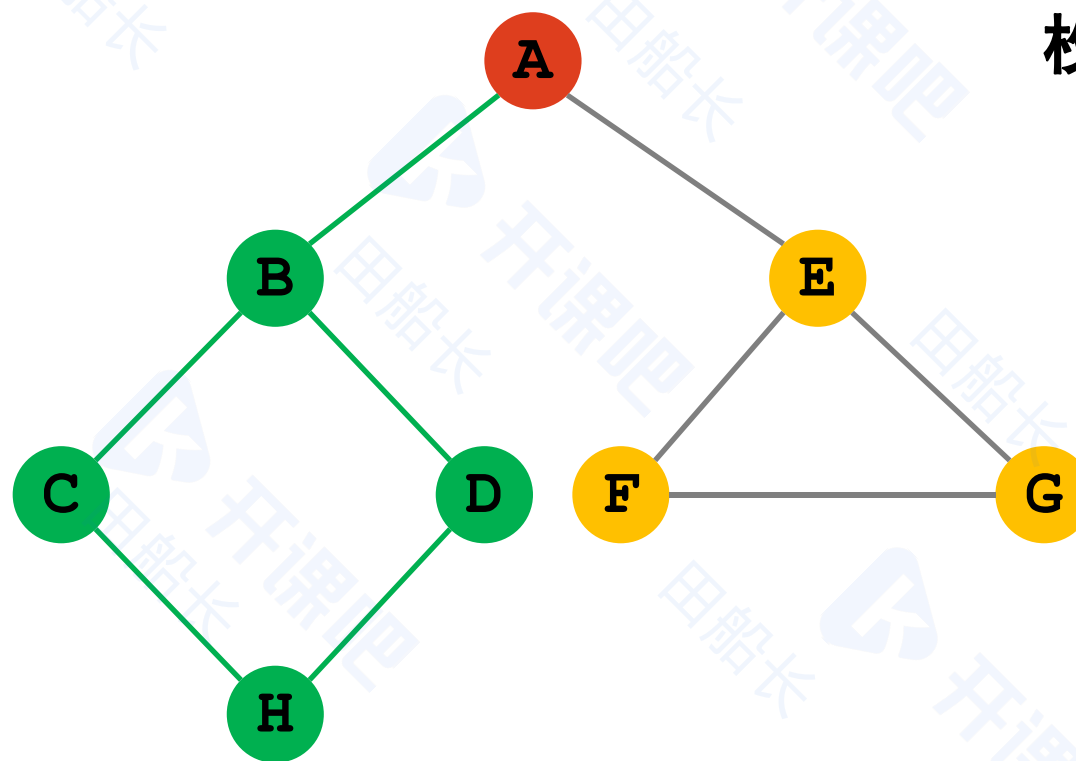
B的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C

# 深度优先遍历

A

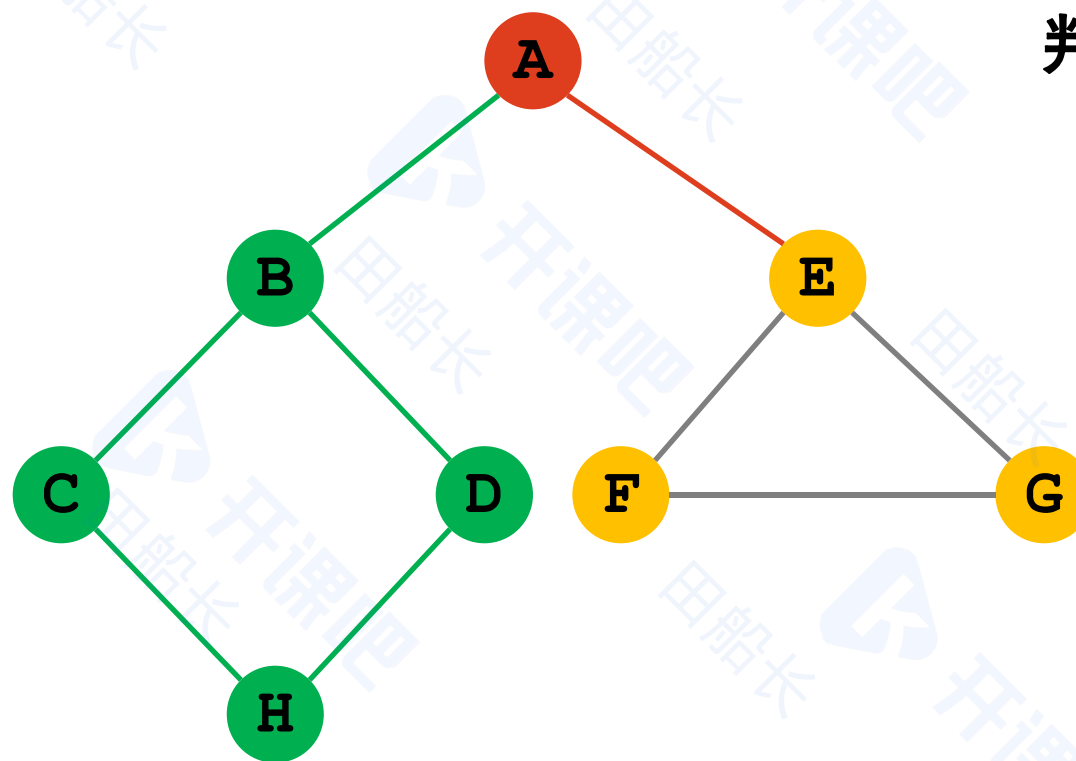
枚举A的相邻结点



遍历序列: A B D H C

# 深度优先遍历

A

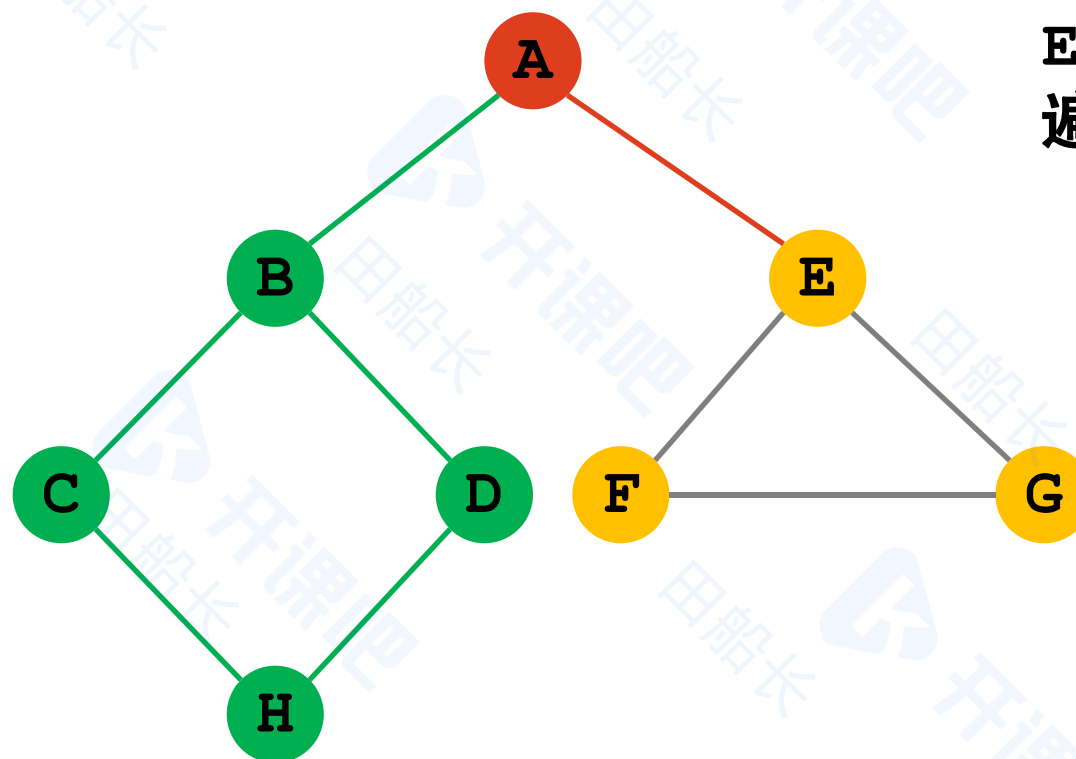


判断E是否被访问过

遍历序列: A B D H C

# 深度优先遍历

A

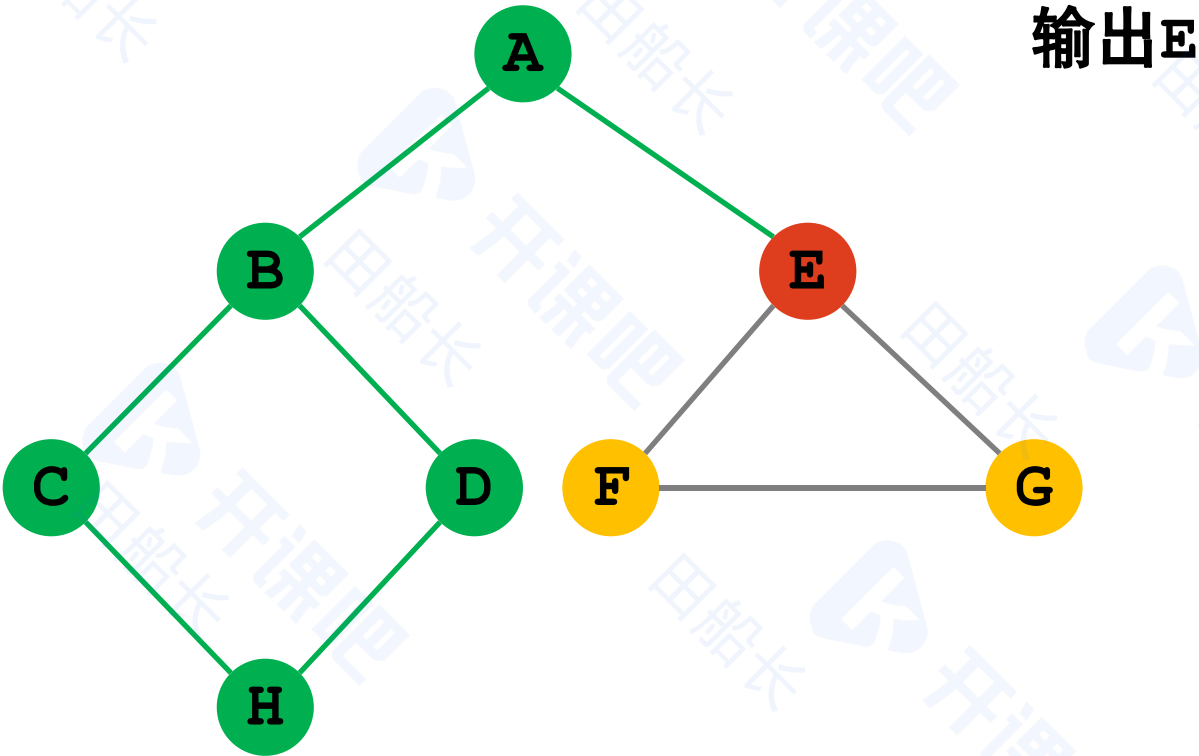


E未被访问过, 深度优先遍历E

遍历序列: A B D H C

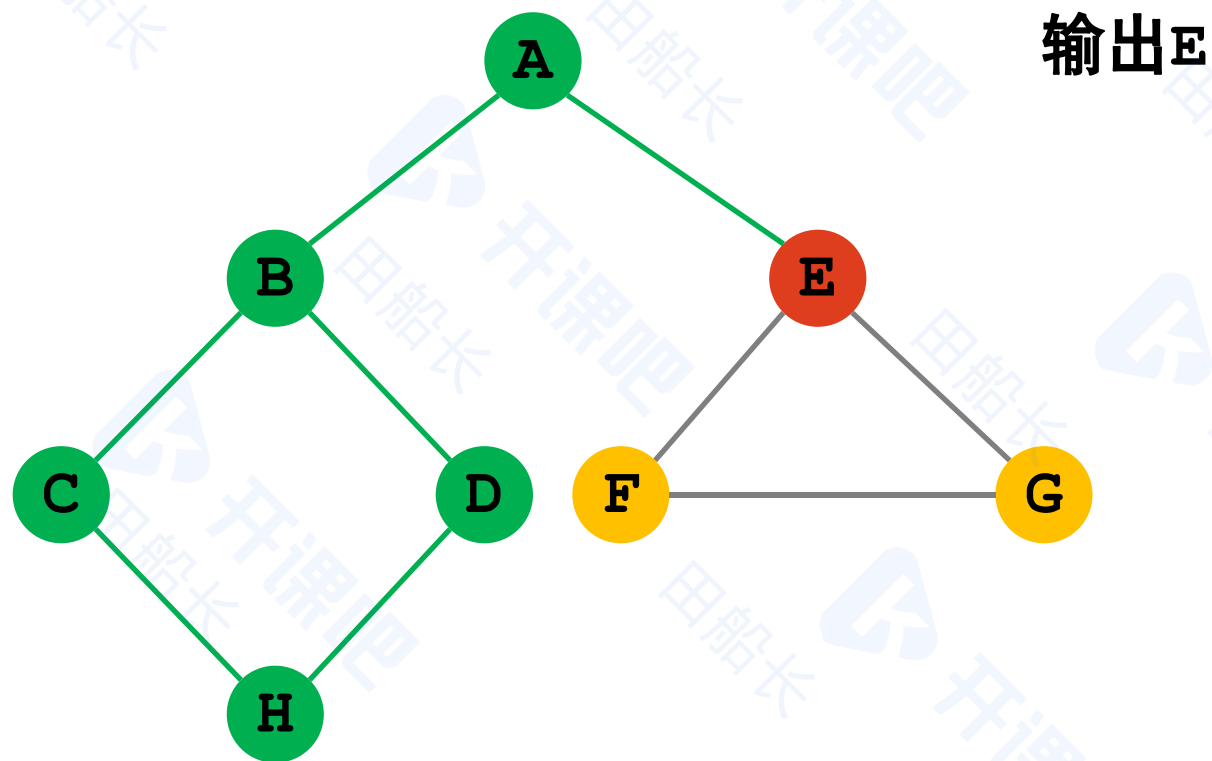
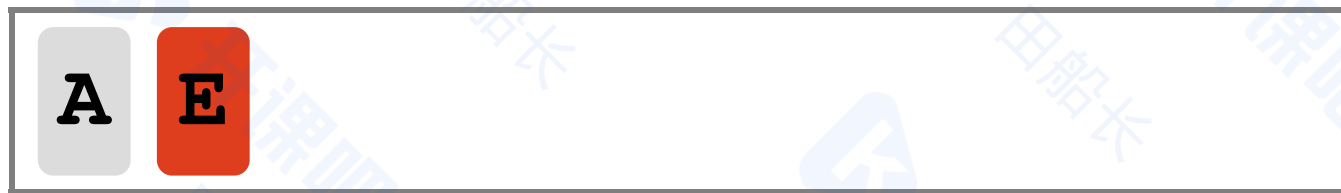


# 深度优先遍历



遍历序列：A B D H C E

# 深度优先遍历

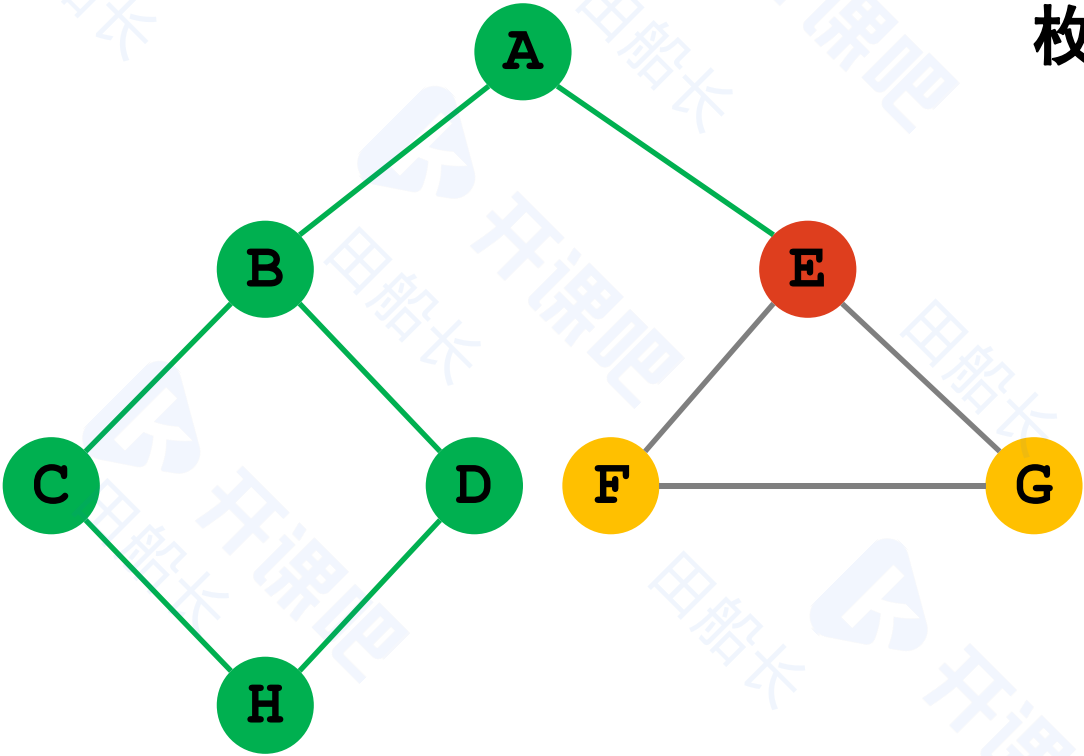


遍历序列: A B D H C E

# 深度优先遍历



枚举E的相邻结点

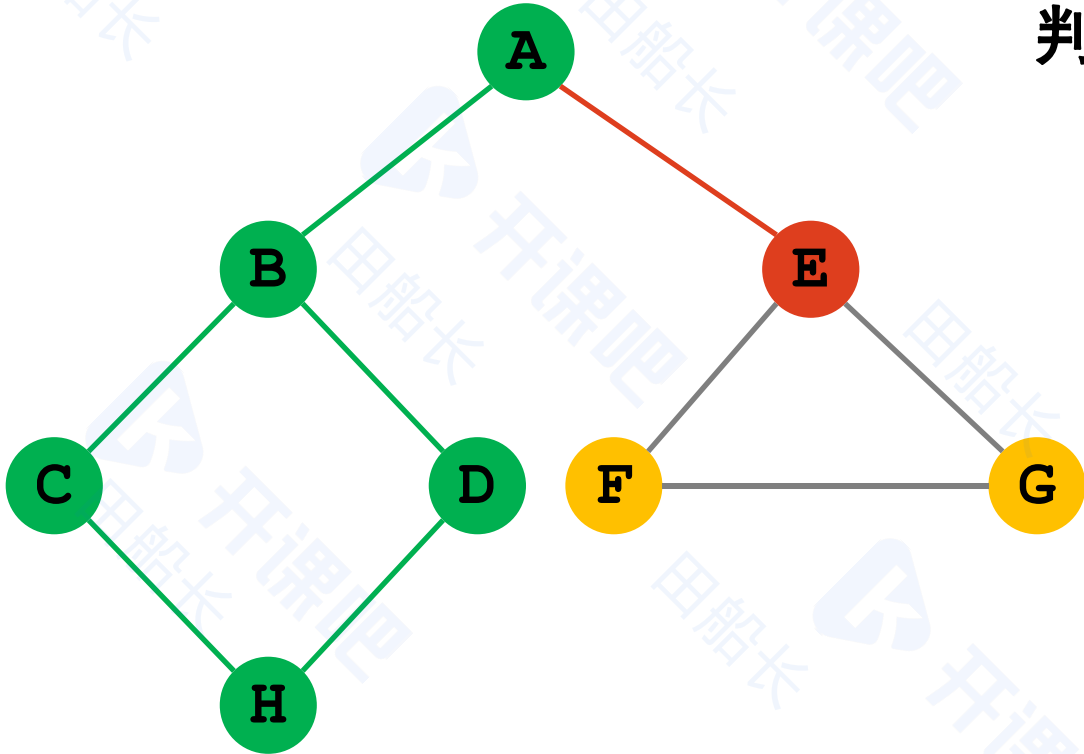


遍历序列：A B D H C E

# 深度优先遍历

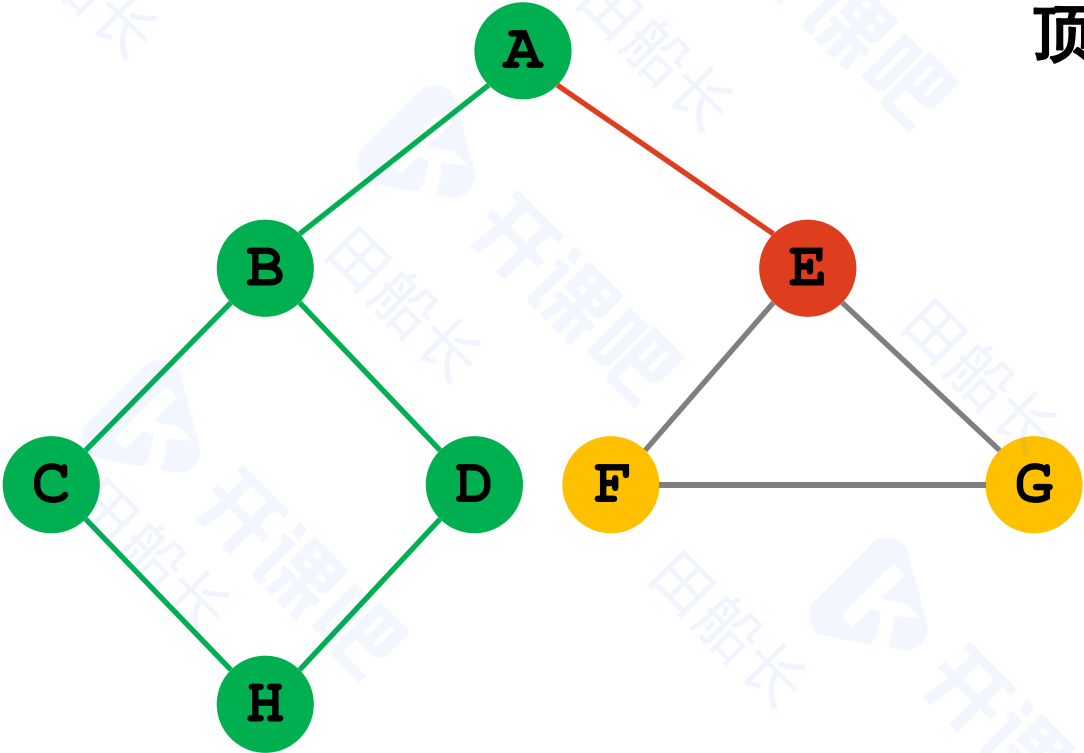


判断A是否被访问过



遍历序列：A B D H C E

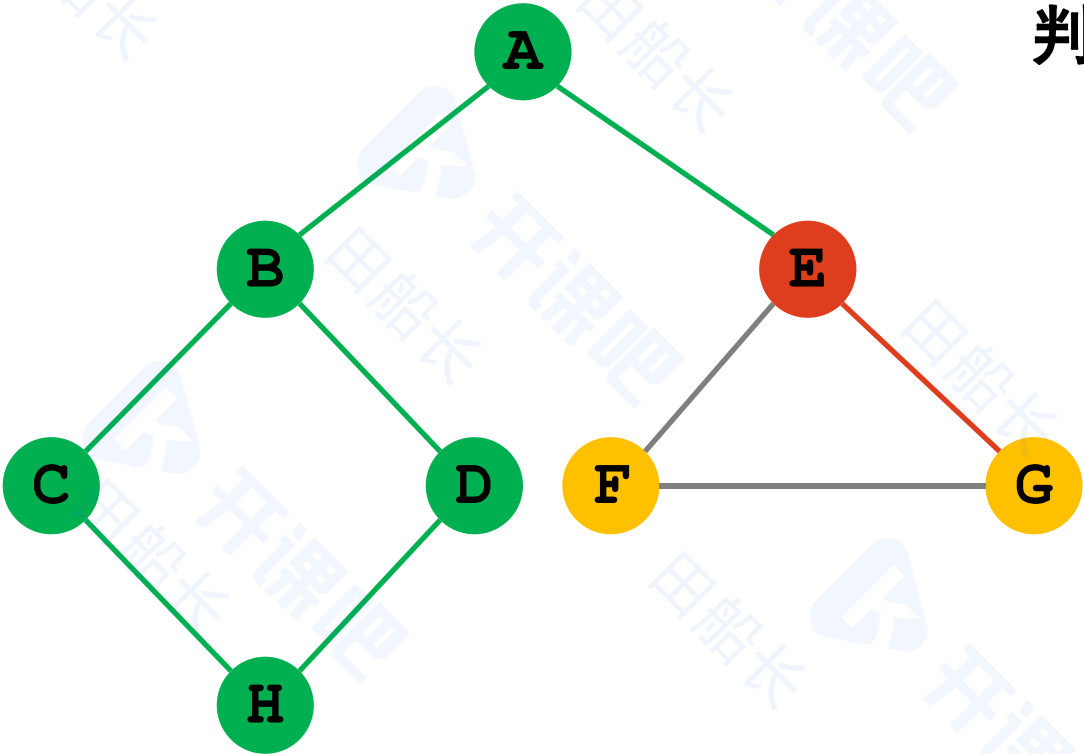
# 深度优先遍历



顶点A已被访问过

遍历序列：A B D H C E

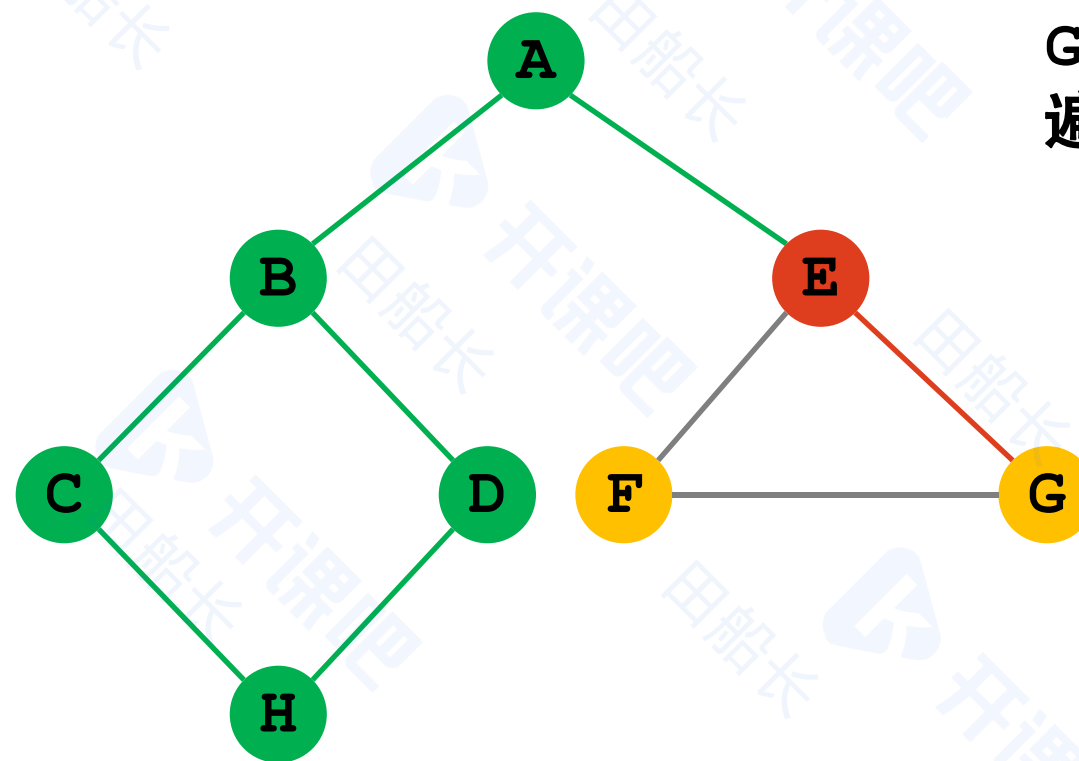
# 深度优先遍历



判断G是否被访问过

遍历序列：A B D H C E

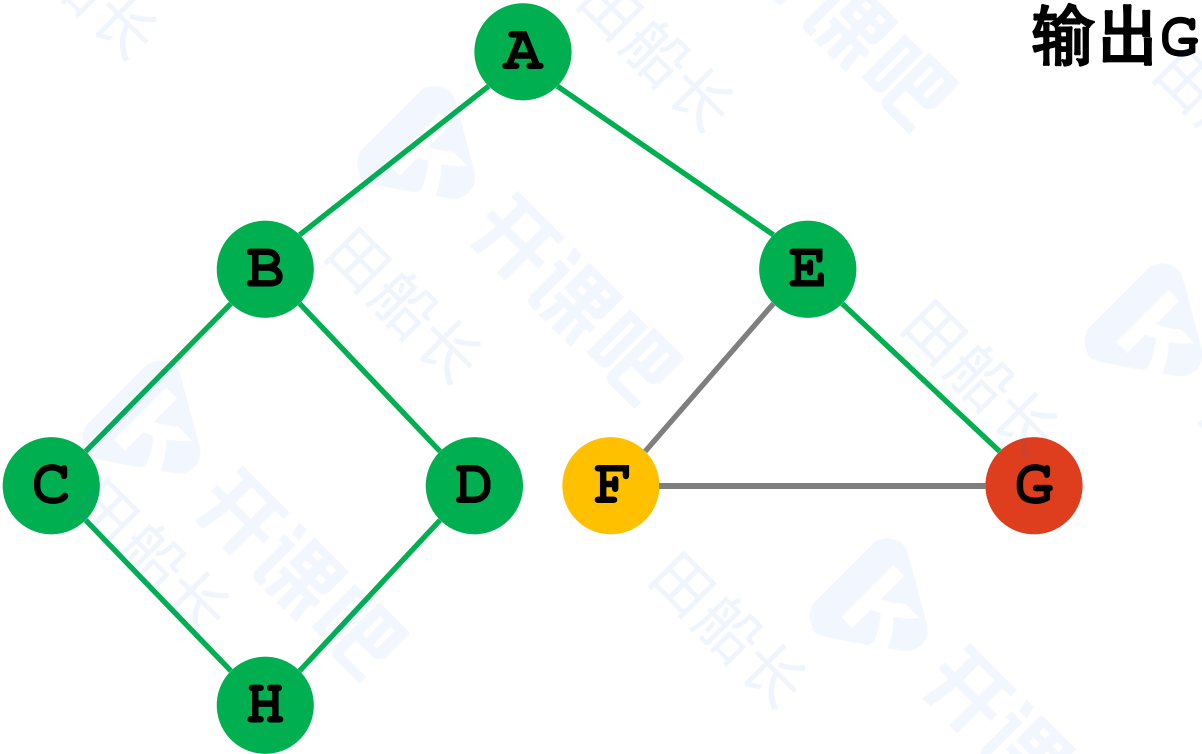
# 深度优先遍历



G未被访问过, 深度优先遍历G

遍历序列: A B D H C E

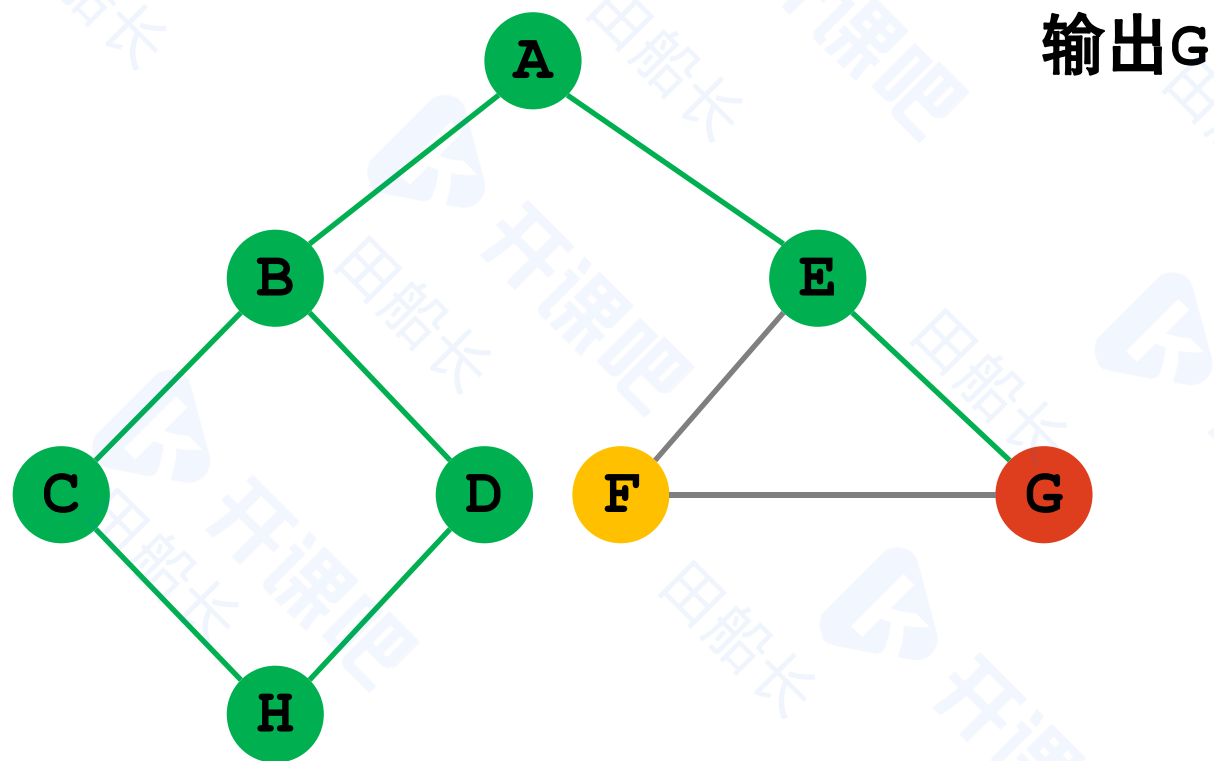
# 深度优先遍历



遍历序列: A B D H C E G



# 深度优先遍历

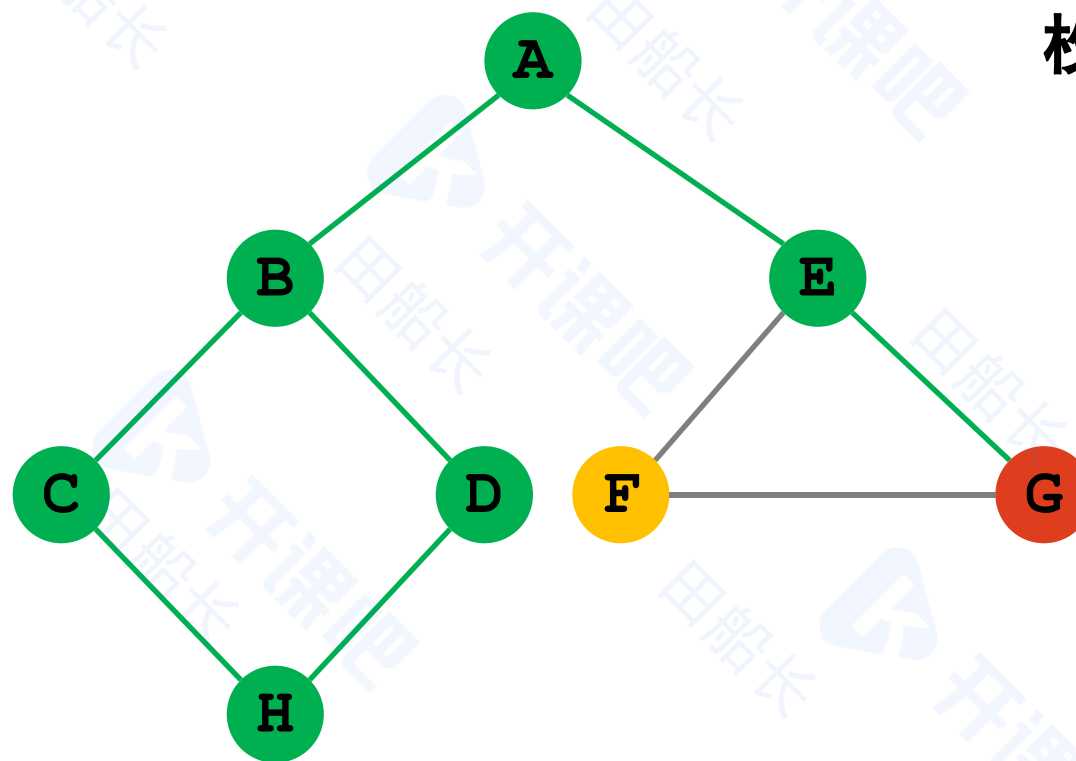


遍历序列: A B D H C E G

# 深度优先遍历

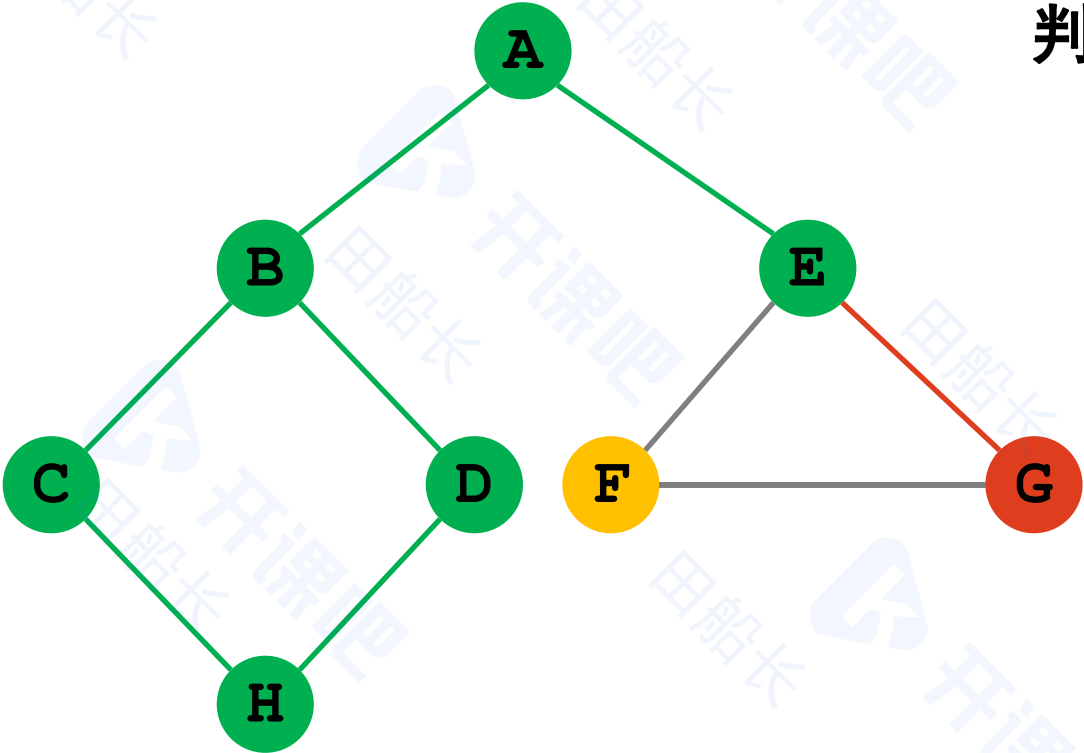


枚举G的相邻结点



遍历序列: A B D H C E G

# 深度优先遍历



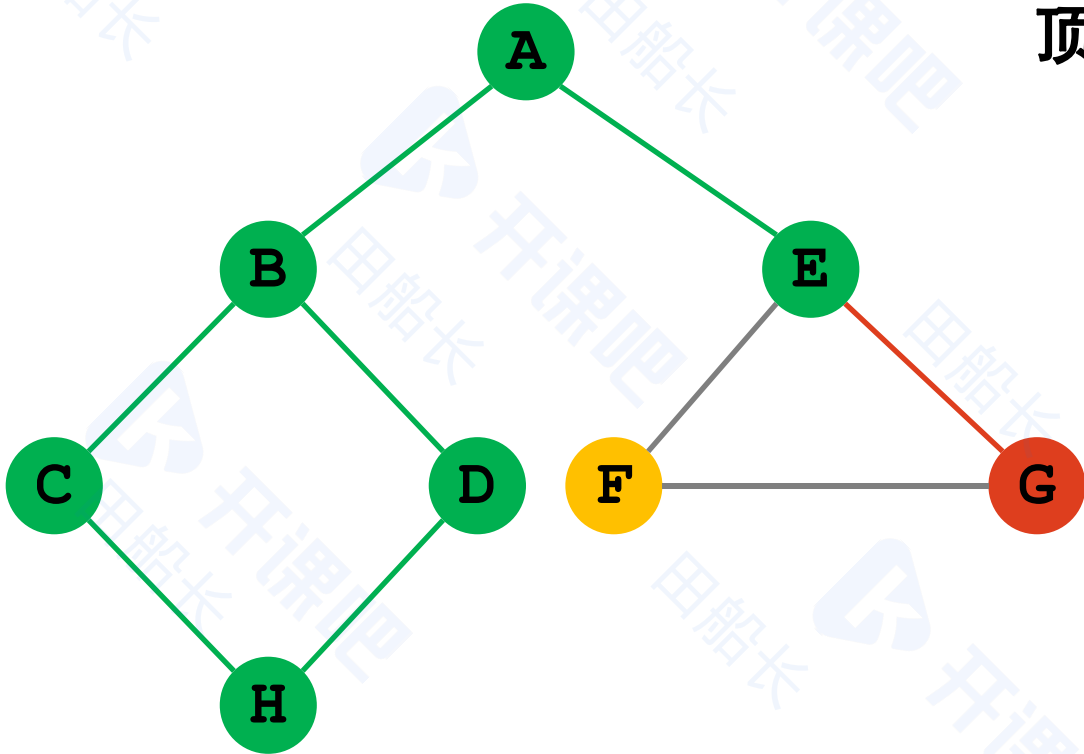
判断E是否被访问过

遍历序列: A B D H C E G

# 深度优先遍历

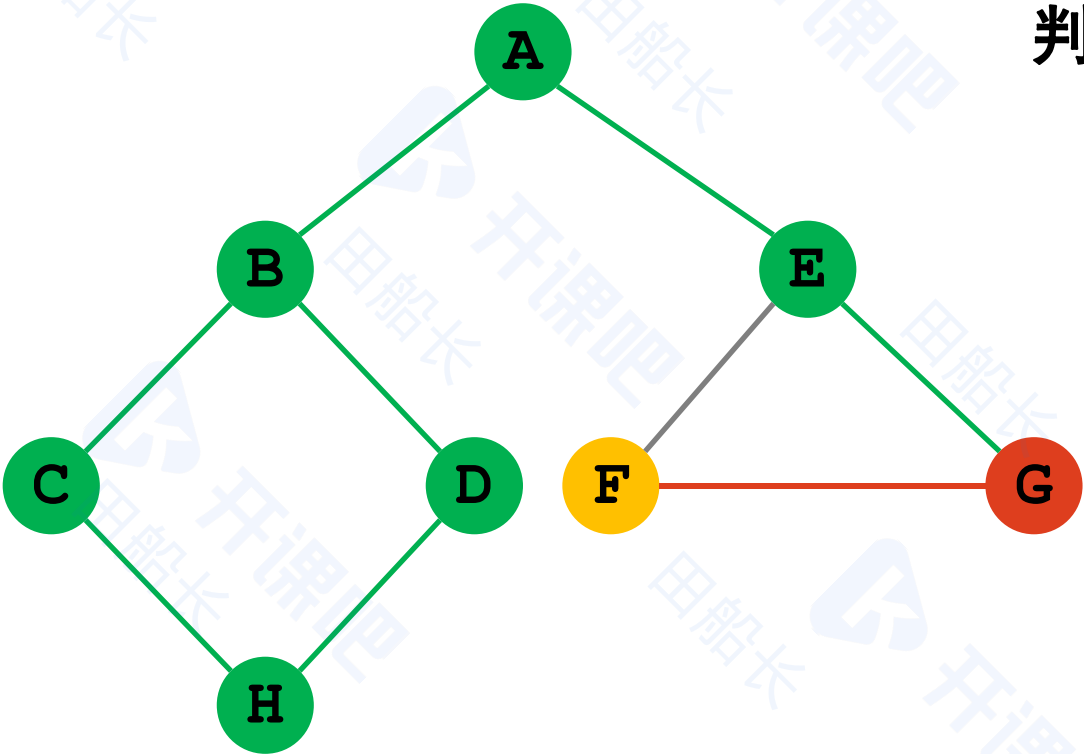


顶点E已被访问过



遍历序列：A B D H C E G

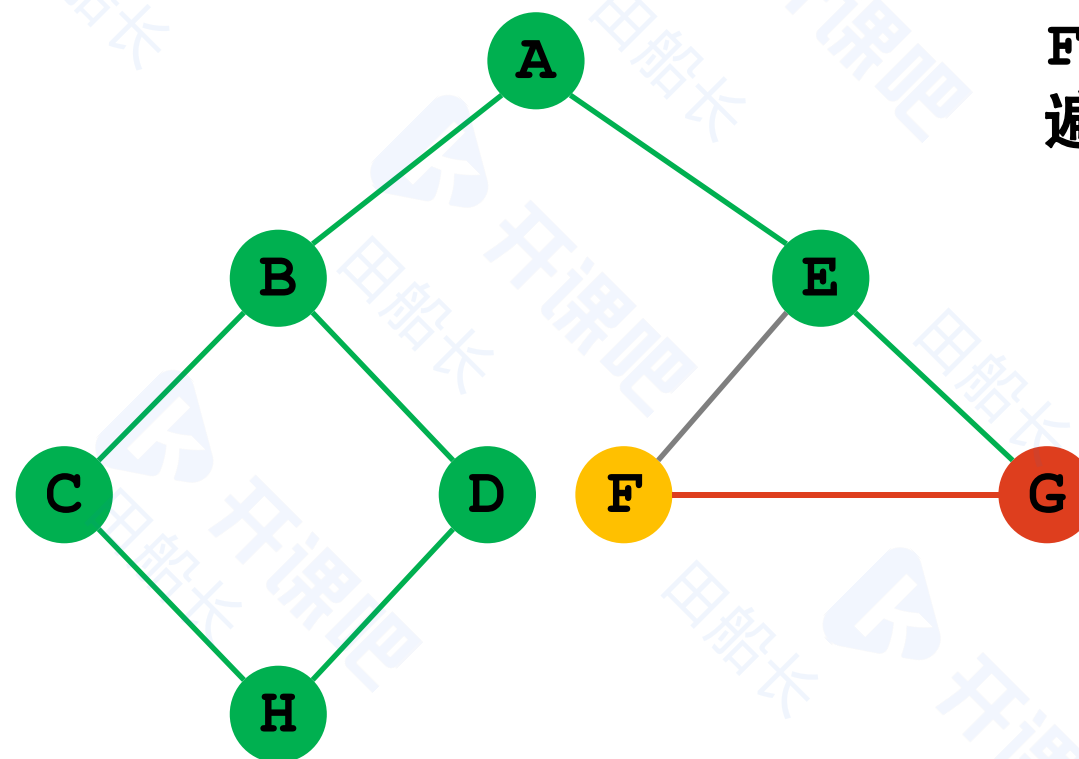
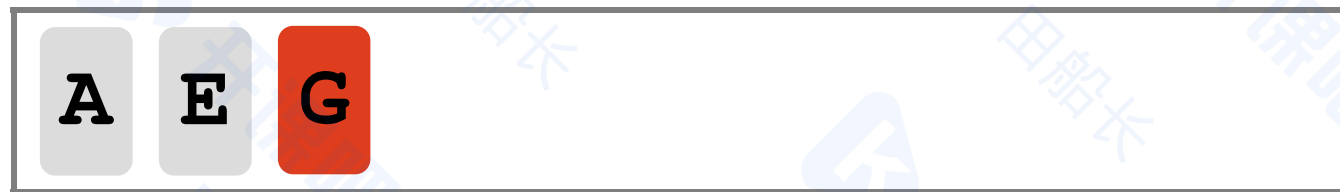
# 深度优先遍历



判断F是否被访问过

遍历序列：A B D H C E G

# 深度优先遍历



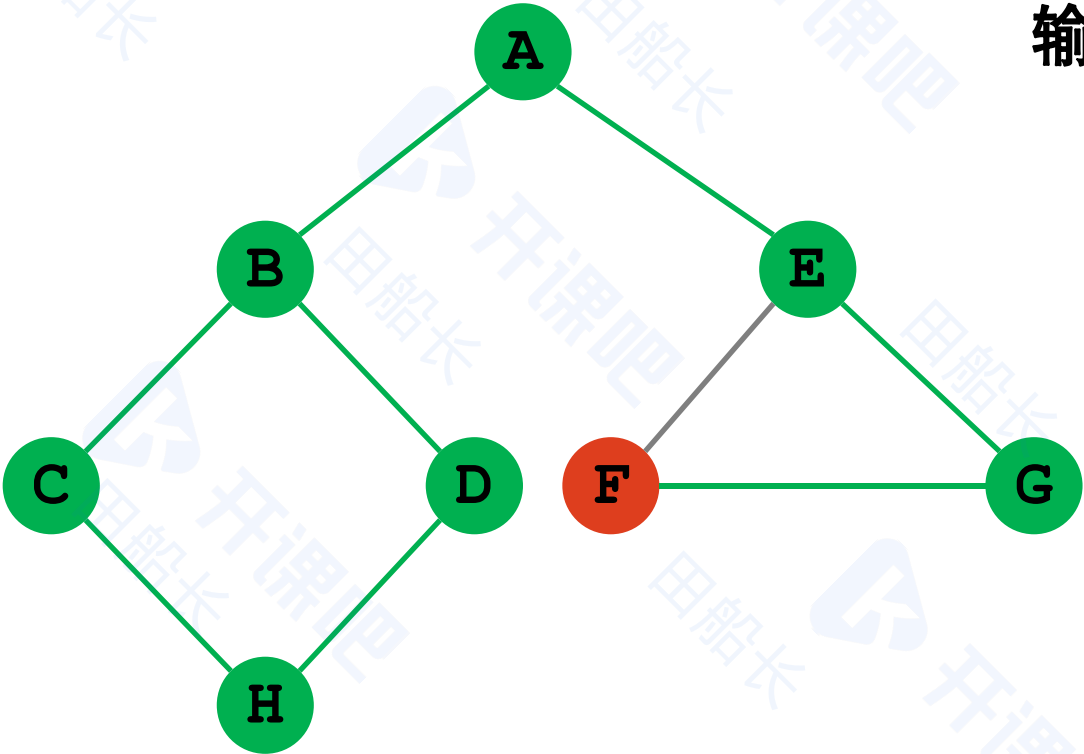
F未被访问过, 深度优先遍历F

遍历序列: A B D H C E G

# 深度优先遍历

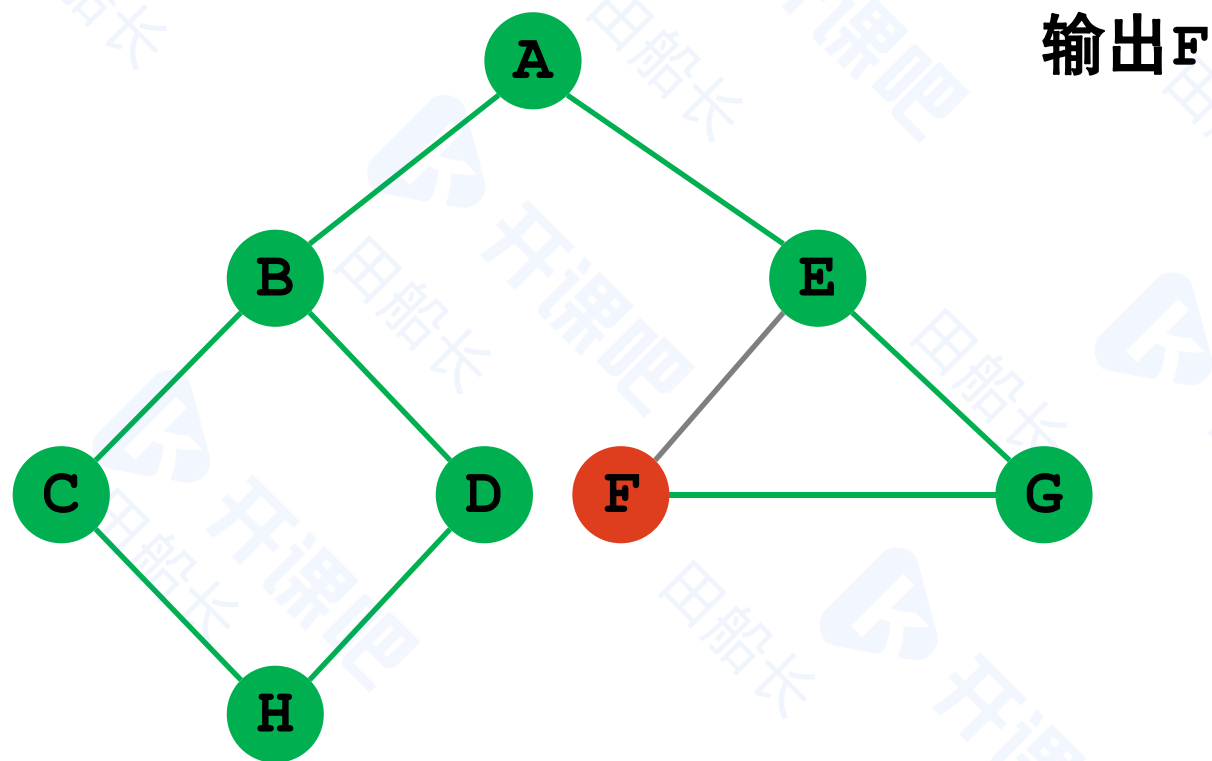


输出F



遍历序列：A B D H C E G F

# 深度优先遍历



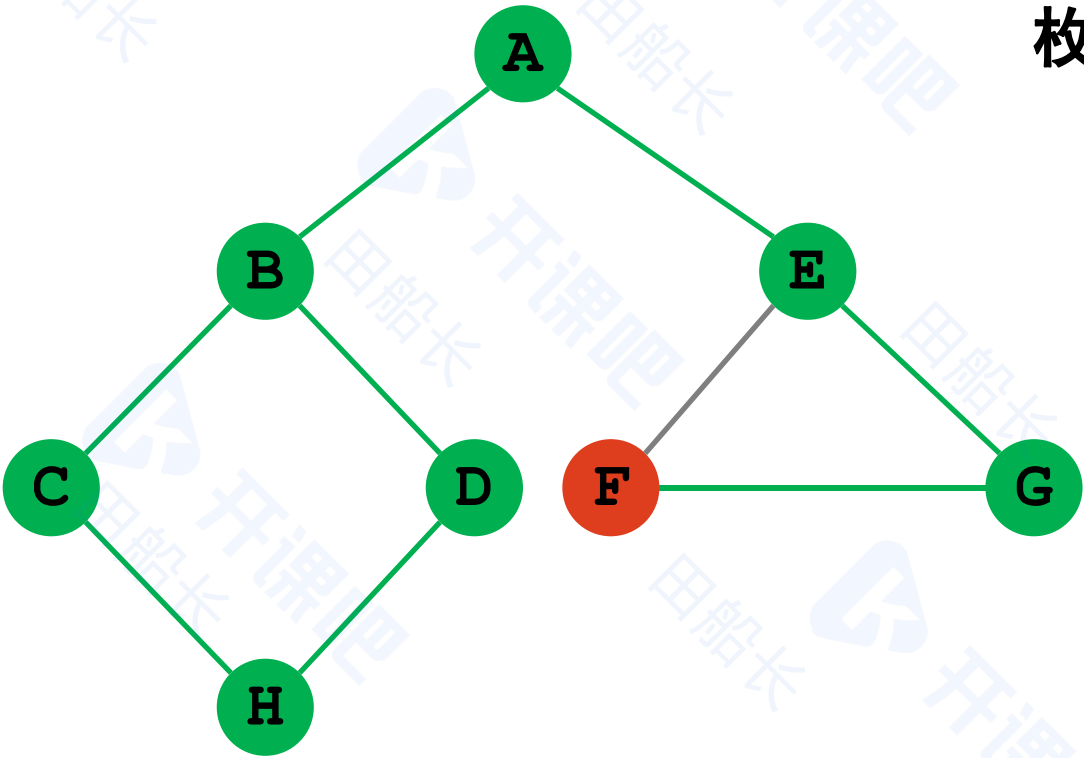
遍历序列: A B D H C E G F



# 深度优先遍历



枚举F的相邻结点

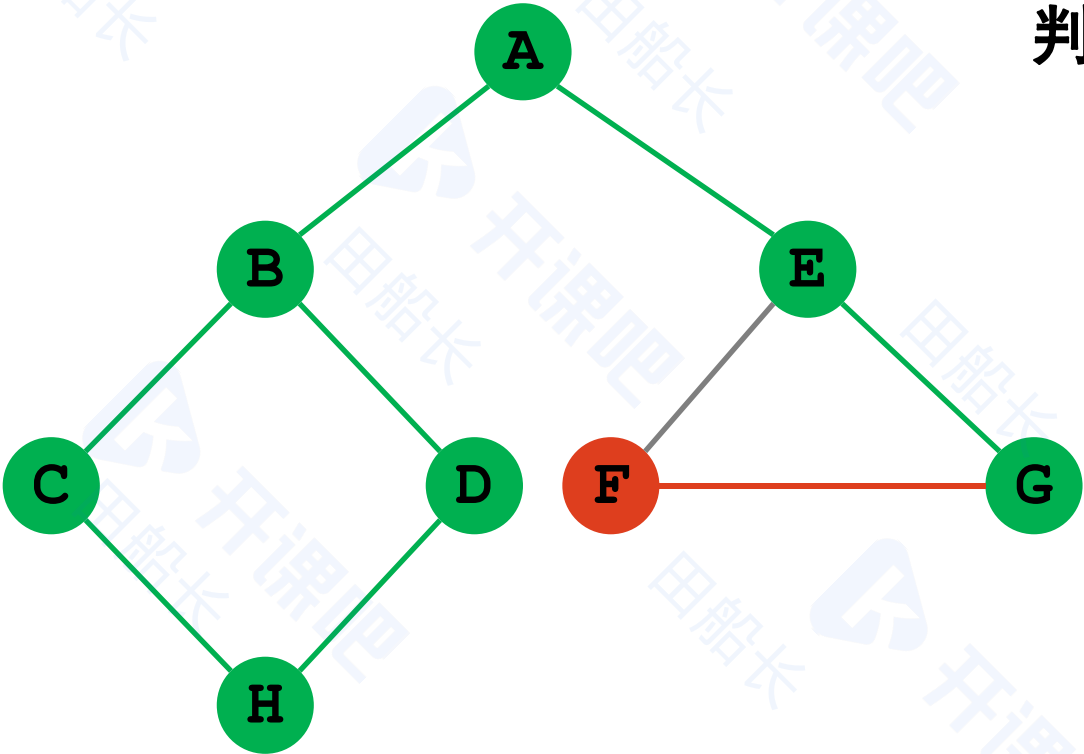


遍历序列：A B D H C E G F

# 深度优先遍历

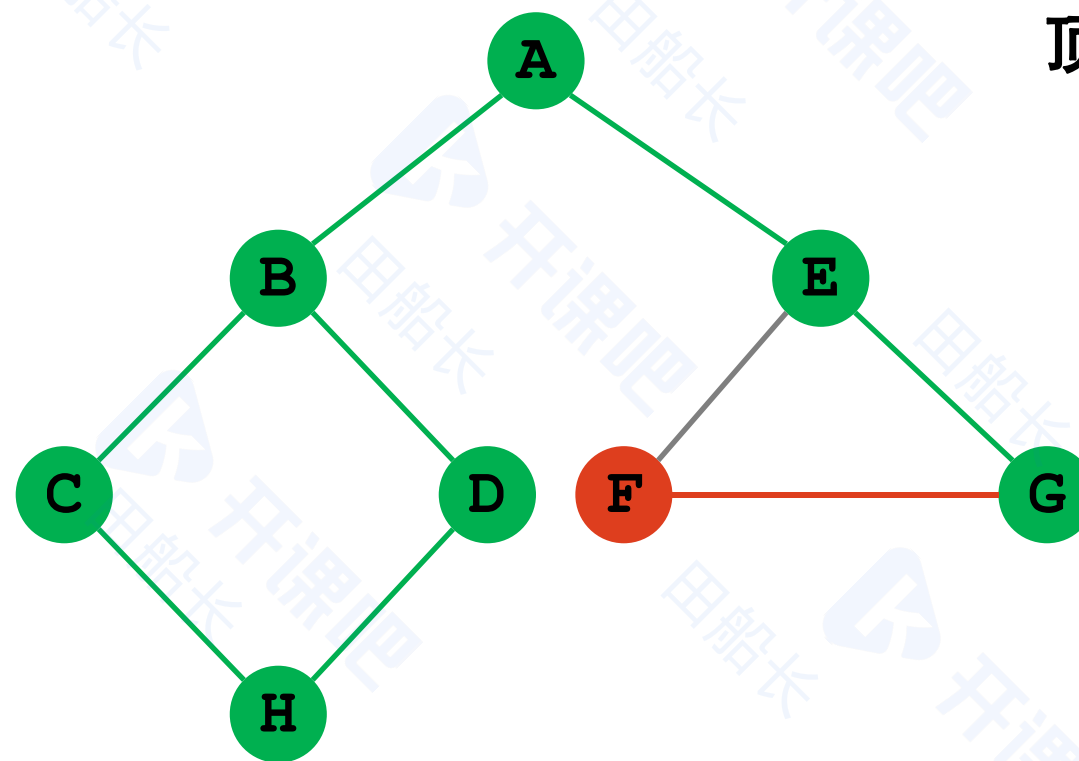


判断G是否被访问过



遍历序列: A B D H C E G F

# 深度优先遍历



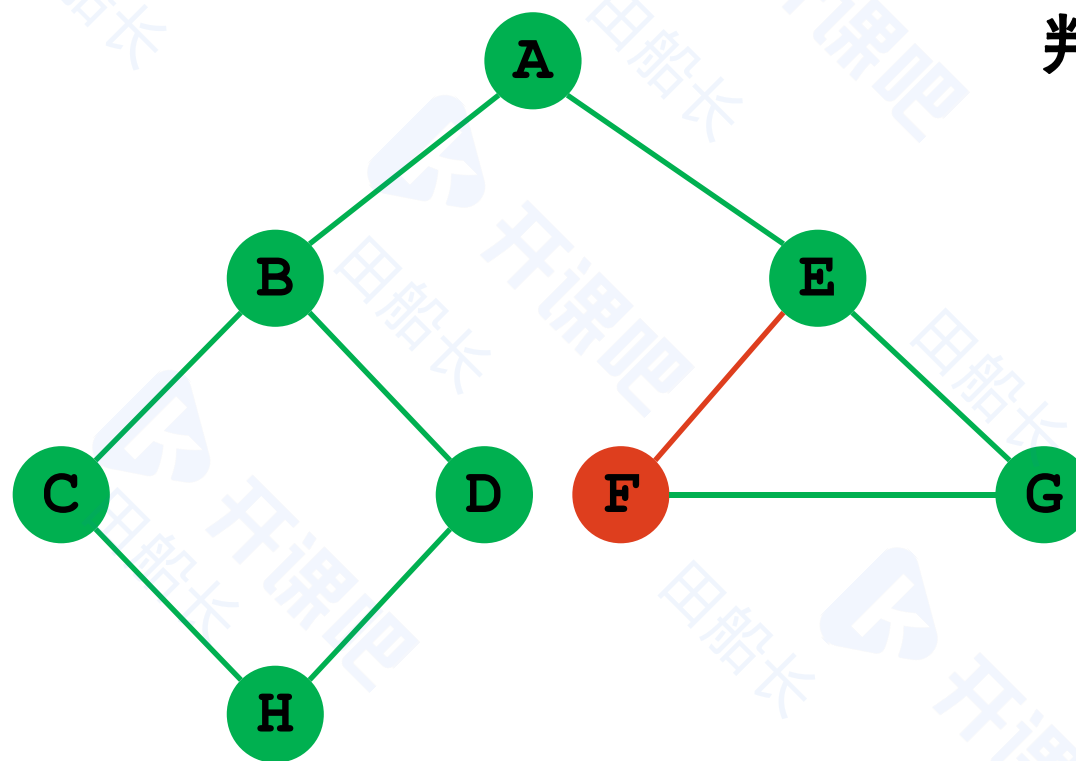
顶点G已被访问过

遍历序列: A B D H C E G F

# 深度优先遍历



判断E是否被访问过

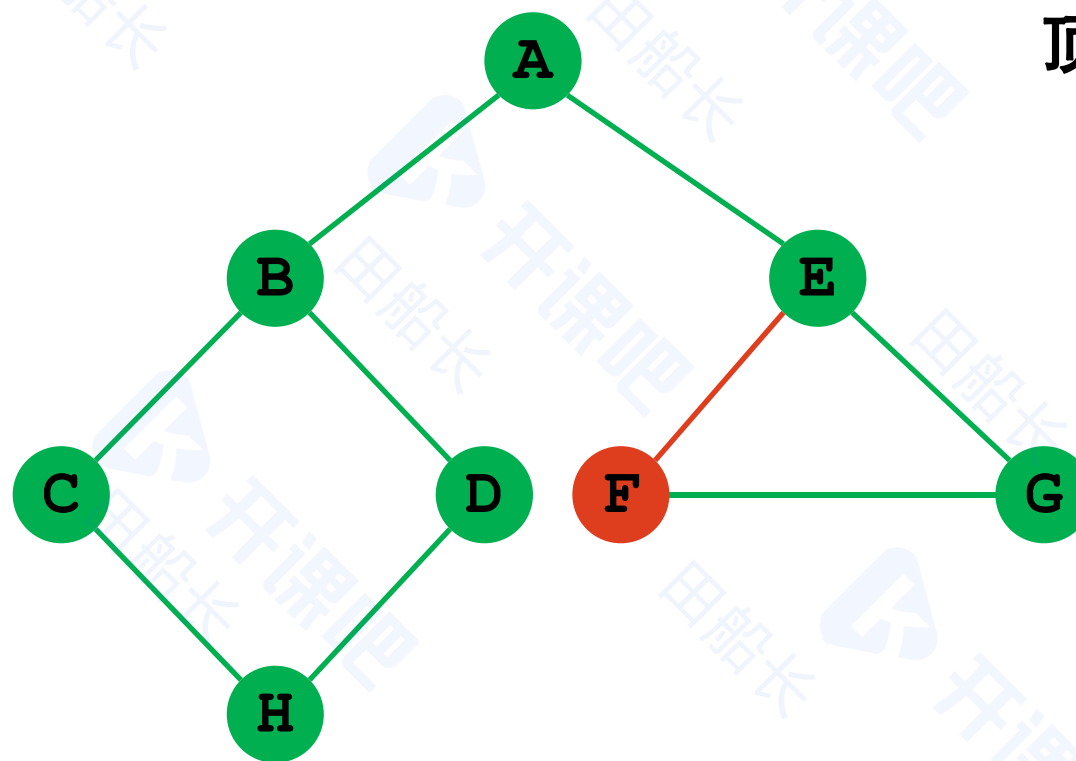


遍历序列: A B D H C E G F

# 深度优先遍历

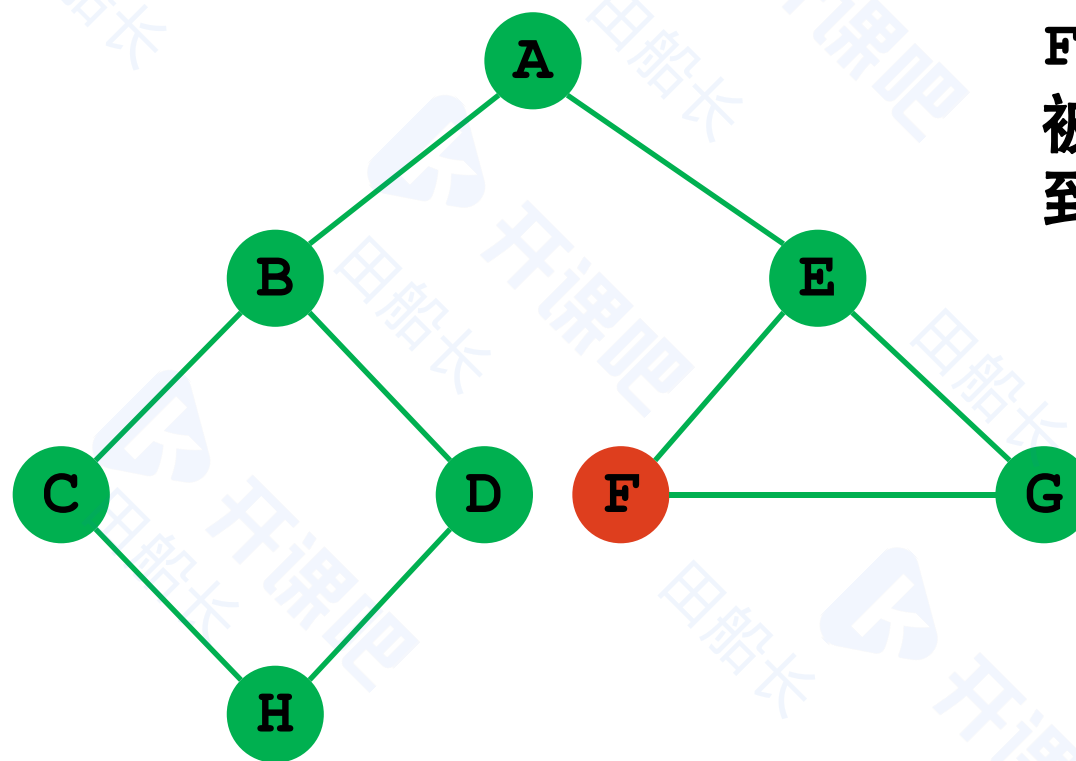


顶点E已被访问过



遍历序列: A B D H C E G F

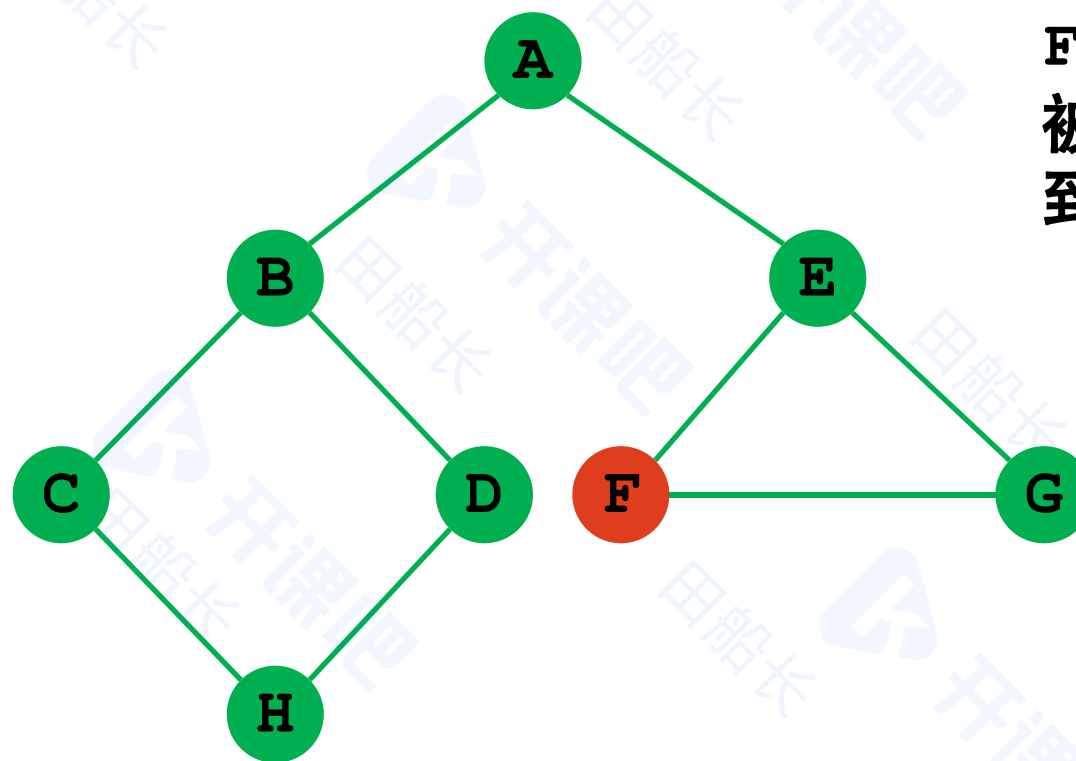
# 深度优先遍历



F的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C E G F

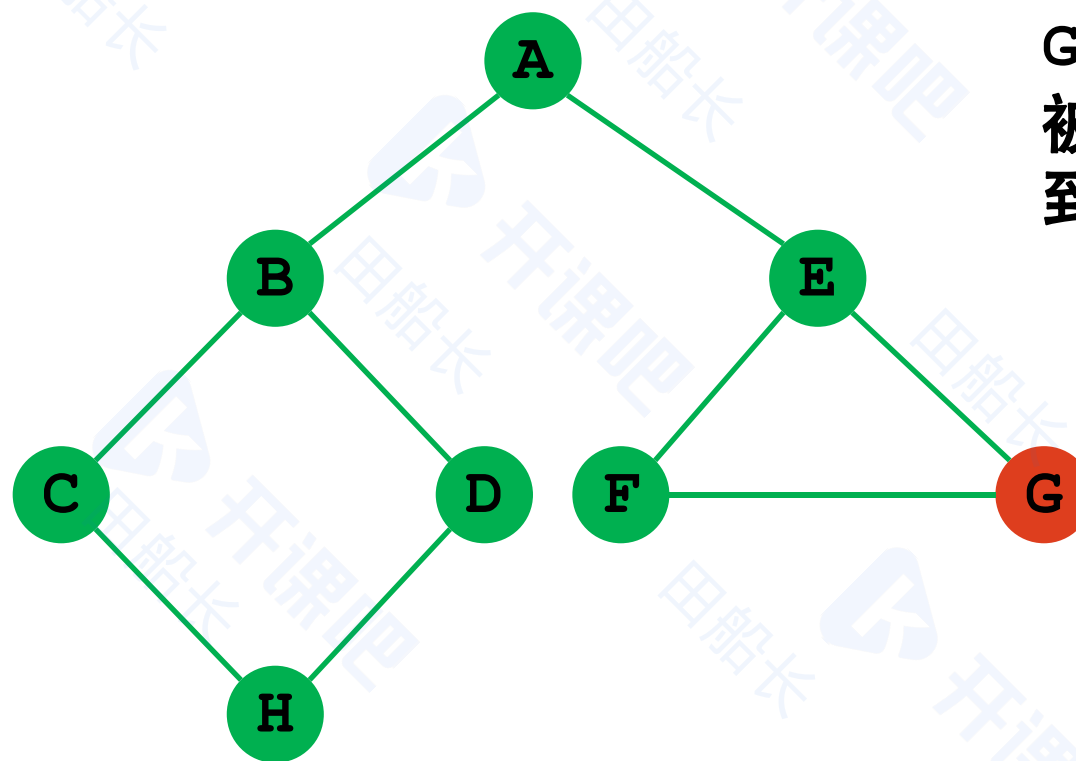
# 深度优先遍历



F的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C E G F

# 深度优先遍历

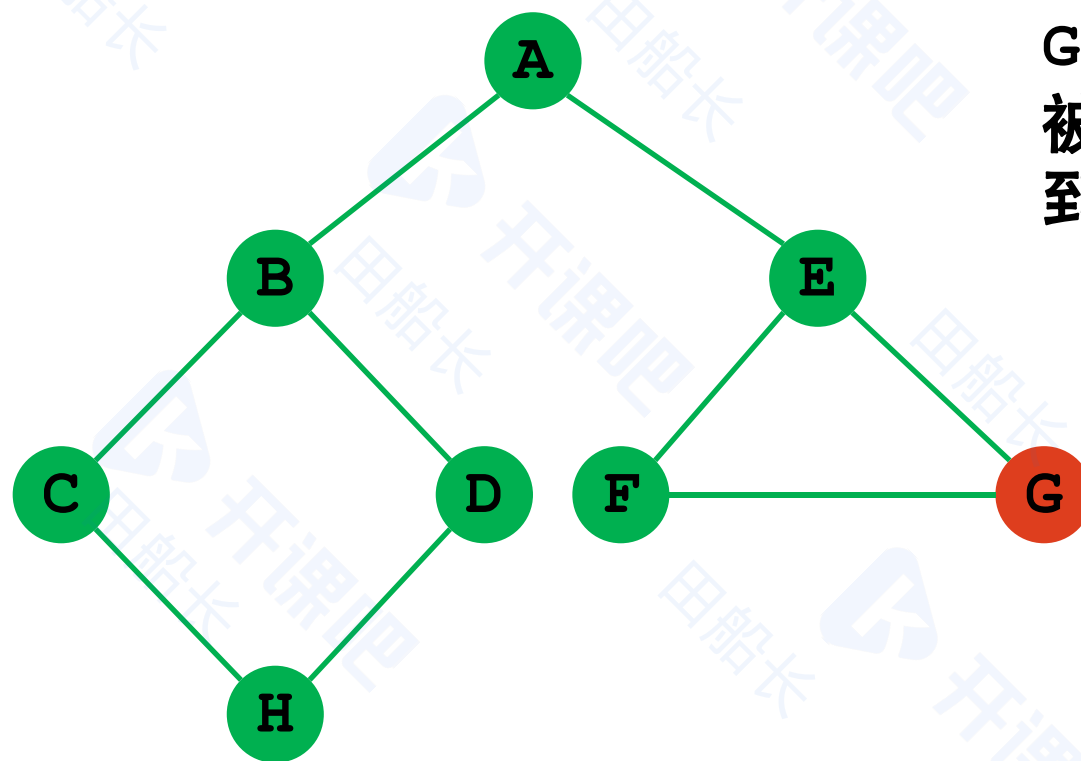
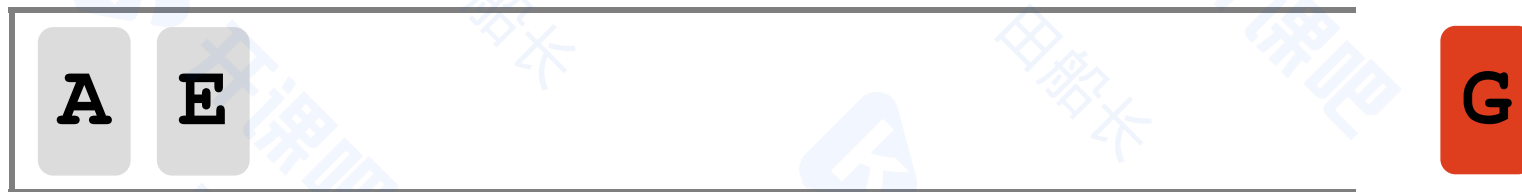


G的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C E G F



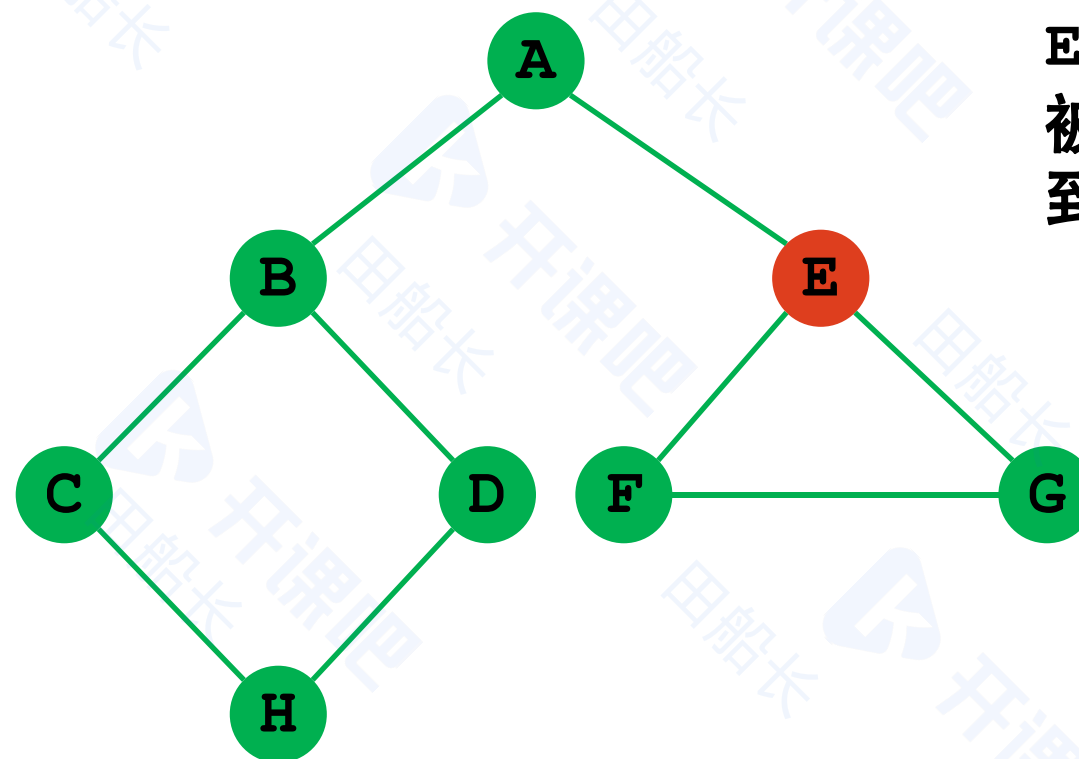
# 深度优先遍历



G的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C E G F

# 深度优先遍历



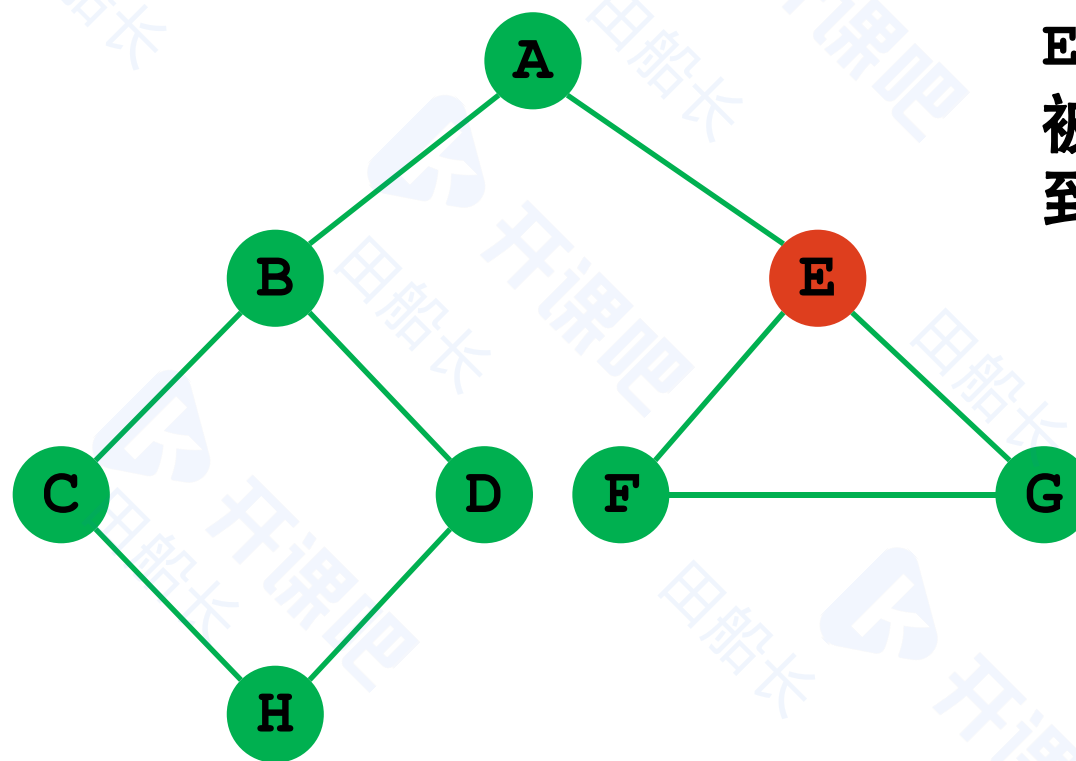
E的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C E G F

# 深度优先遍历

A

E

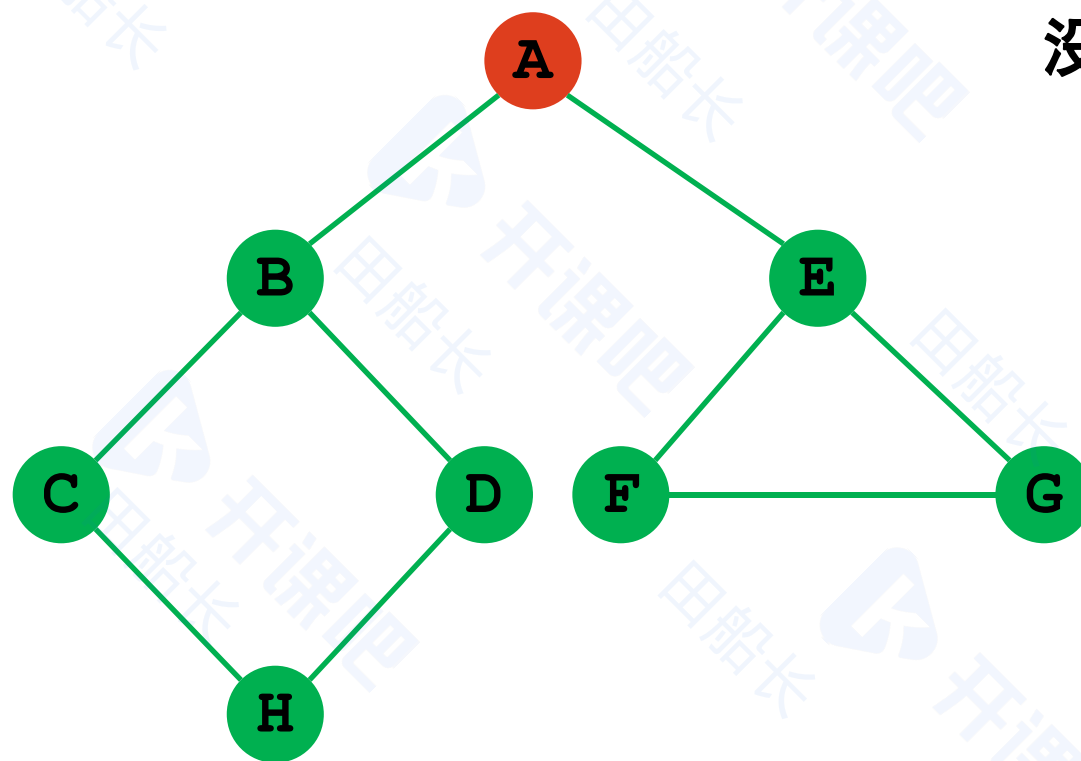


E的相邻顶点均已被访问过，回溯到上一顶点

遍历序列：A B D H C E G F

# 深度优先遍历

A



没有未访问的点

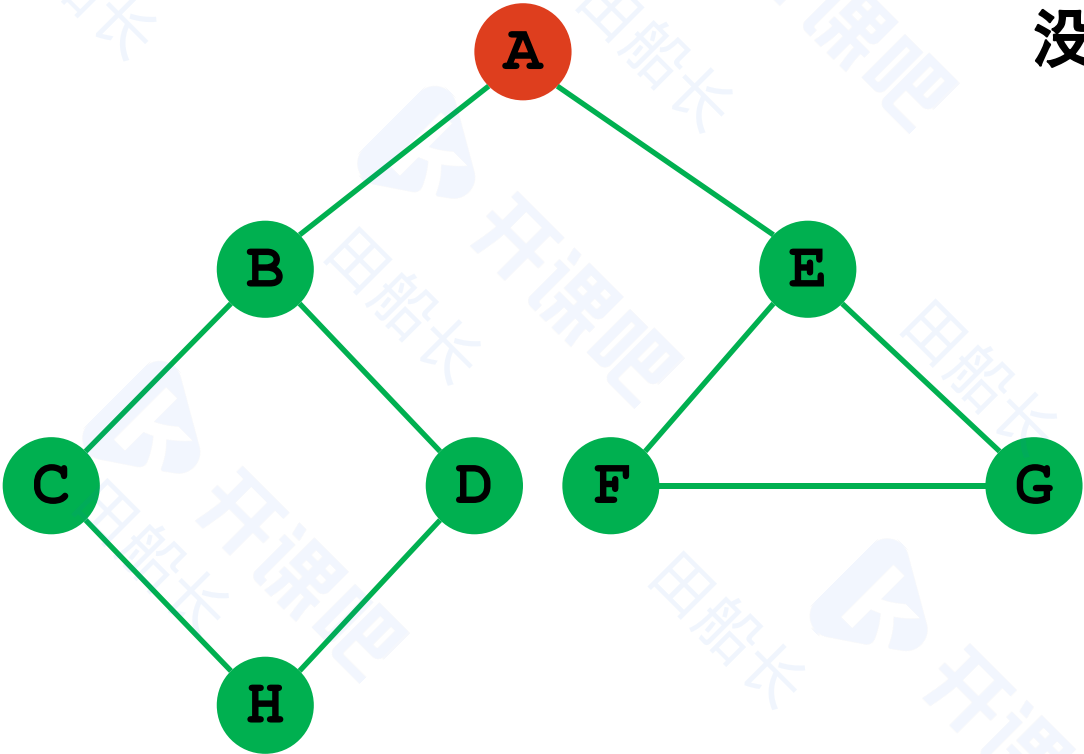
遍历序列: A B D H C E G F

# 深度优先遍历



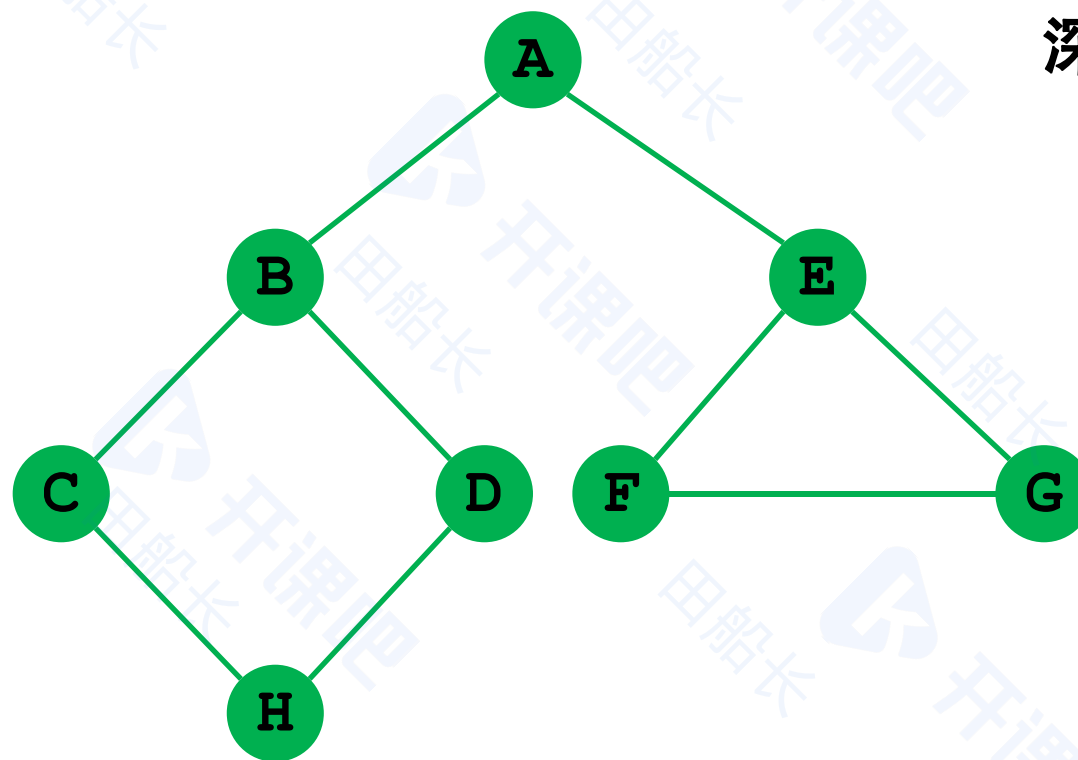
A

没有未访问的点



遍历序列：A B D H C E G F

# 深度优先遍历



深度优先遍历完成

遍历序列: A B D H C E G F