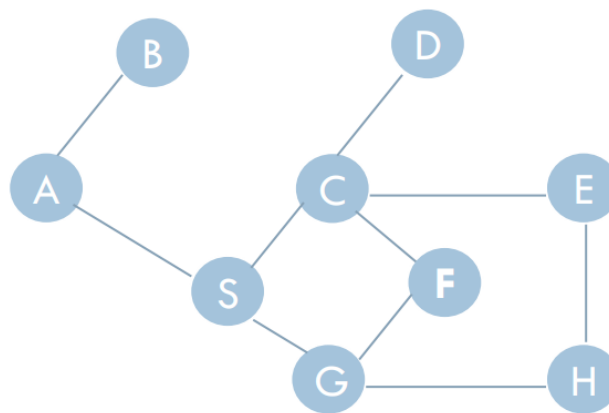


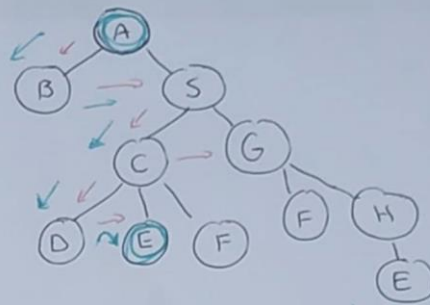
TD1: Searching Algorithms

Exercise 1:

Given the graph below, find the path from the start node A to the goal node E, using:

- Breadth-First Search
- Depth First Search





- Breadth First Search

FIFO

H	F	F	E	D	G	C	S	B	A
---	---	---	---	---	---	---	---	---	---

visited nodes

ABSCGDE

Path

ABSCGDE

- Depth First Search

Stack

D
E
F
C
G
B
S
A

visited nodes

ABSCDE

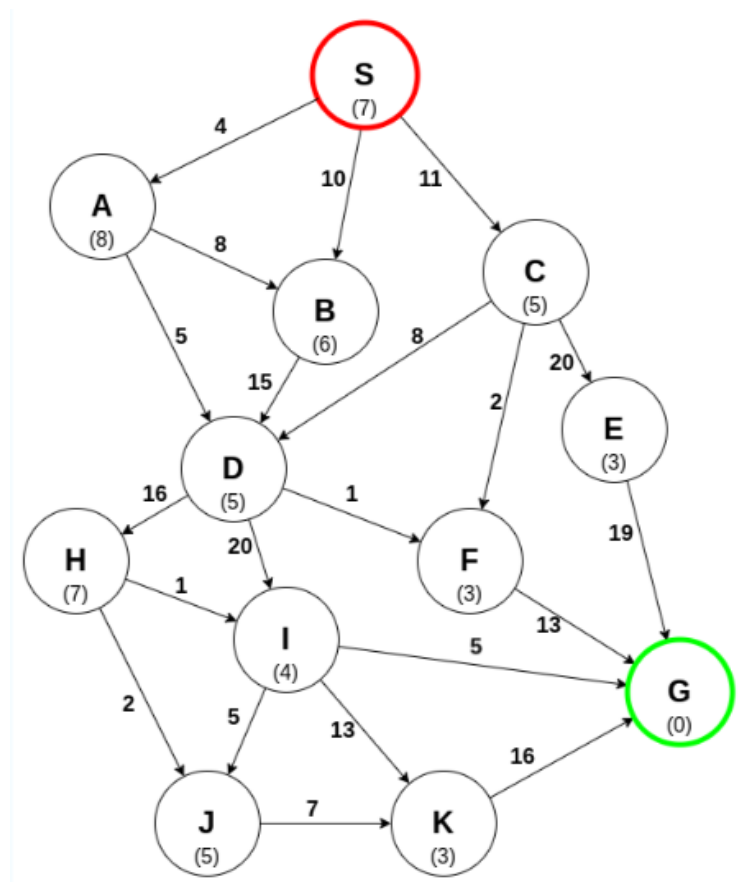
path

ABSCDE

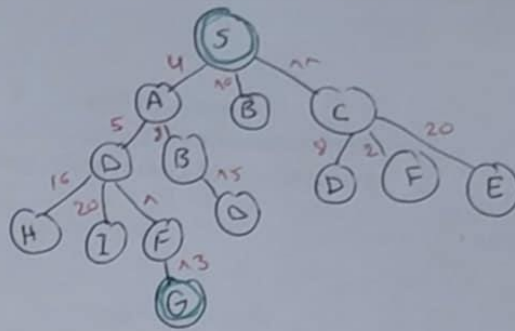
Exercise 2:

Given the graph below, find the shortest path from the start node S to the goal node G, using:

- Uniform Cost Search
- A Star Search



Uniform Cost Search



priority queue

		B ₈	D ₅	C ₁₁	B ₁₀	A ₄	S
H ₁₆	I ₂₀	F ₁	C ₁₁	B ₁₀	B ₃	D ₅	
E ₂₀	I ₂₀	H ₁₆	C₁₁	B₁₀	B₃	D₅	
			G ₁₃				

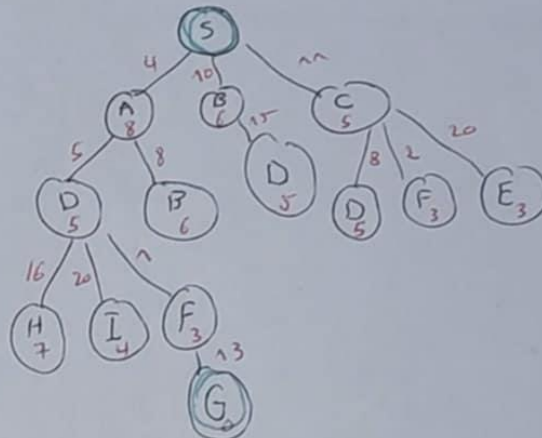
visited nodes

SADFB C G

path

SADFG

A* Search



priority queue

		B ₁₈	D ₁₄	C ₁₆	B ₁₆	A ₁₂	S
H ₃₂	I ₃₃	F ₁₃	B ₁₈	C ₁₆	B ₁₆	D ₁₄	
E ₃₄	I ₃₃	H ₃₂	B₁₈	C₁₆	B₁₆	D₁₄	
			G ₂₃				

visited nodes

SADFB C G

path

SADFG