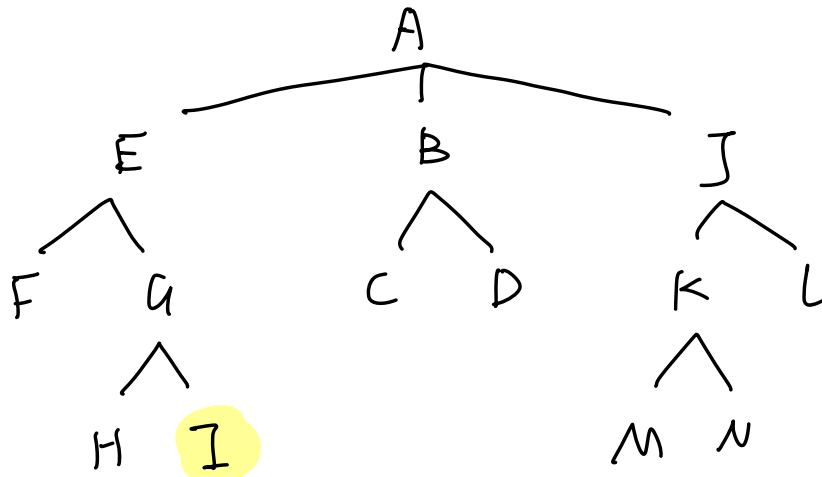


Extra - Exercise 1 - Q 3

Q (i) DFS (ii) BFS (iii) IDS (iv) Back Tracking



Solution (i) DFS

Open

A

E B J

F G B J

G B J

H I B J

I B J

Close

[]

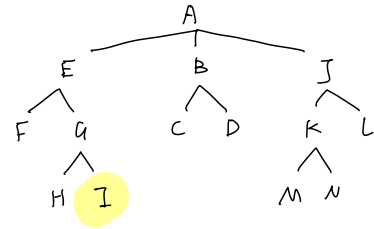
A

E A

F E A

G F E A

H G F E A



find the goal I

A E F G H I

(ii) BFS

Open

A

E B J

B J F G

J F G C D

F G C D K L

G L D K L

C D K L H I

Closed

[]

A

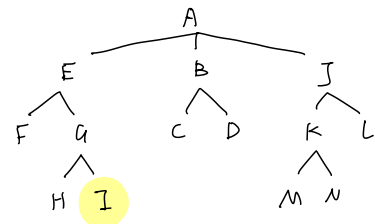
E A

B E A

J B E A

F J B E A

G F J B E A



DKLHI

CGFJBEA

KLHI

DCGFJBEA

LHIMN

KDCGFJBEA

HI MN

LKDCGFJBEA

IMN

HLKDCGFJBEA

find the goal I

A E B J F G C D K L H I

(iii) IDS

① Depth: 1

Open

Closed

A

[]

E B J

A

B J

E A

J

B E A

[]

J B E A

② Depth: 2

Open

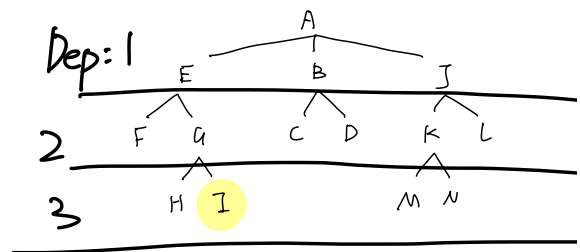
Closed

A

[]

E B J

A



FABJ	EA
GBJ	FEA
BJ	GFEA
CDJ	BGFEA
DJ	CBGFEA
J	DCBGFEA
KL	JDCBGFEA
L	KJDCBGFEA
[]	LKJDCBGFEA

③ Depth: 3

Open

close

A

[]

E B J

A

F G B J

EA

G B J

FEA

H I B J

GFEA

I B J

HGFEA

Depth: 1 | A B E J

Depth: 2 | A E F G B C D J K L

Depth: 3 | A E F G H I

(iv) BT

CS	SL	N SL	DE
A	A	A	[]
E	EA	EBJA	[]
F	FEA	FGEBJA	[]
G	GEA	GEBJA	F
H	HGEA	HIGEBJA	F
I	IGEA	IGEBJA	HF

find the goal

A E F G H I.

