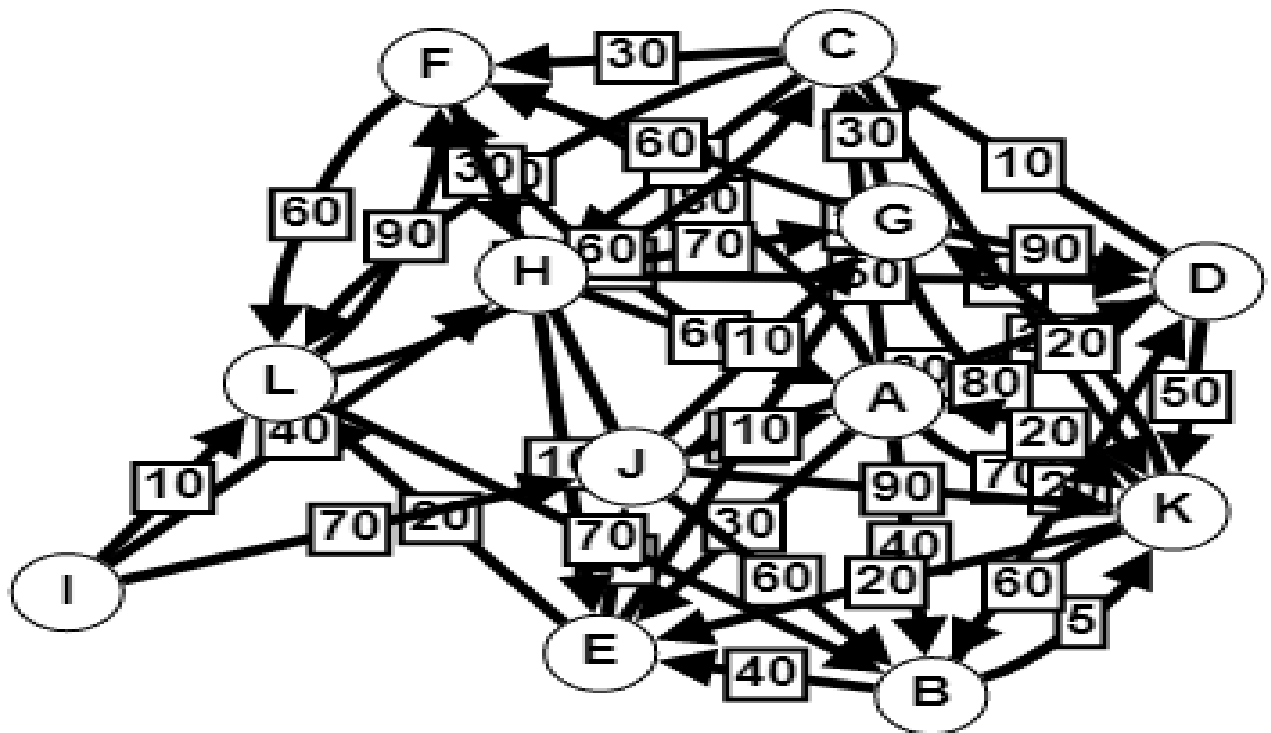


GRAPH:1

to from	A	B	C	D	E	F	G	H	I	J	K	L
A	0	40	20	20	30	80	0	0	0	0	70	0
B	0	0	0	20	40	0	0	0	0	0	5	0
C	0	0	0	0	0	30	0	50	0	0	30	30
D	0	0	10	0	0	0	0	0	0	30	50	0
E	0	0	0	0	0	0	40	0	0	20	0	20
F	10	0	0	0	0	0	0	30	0	0	0	60
G	0	0	30	90	0	60	0	0	0	0	80	0
H	60	0	0	50	10	0	70	0	0	0	0	0
I	0	0	0	0	0	0	0	40	0	70	0	10
J	10	60	0	0	0	80	10	0	0	0	90	0
K	20	60	0	0	20	0	20	0	0	0	0	0
L	0	70	60	0	0	90	0	0	0	0	0	0

The Graph of above adjacency matrix



Depth-first traversal of the graph, beginning at vertex B

BDCFAEGKJLH

B (Starting from)	Connected are D, E, K	Moving to D
D	C, J, K	C
C	F, H, K, L	F
F	A, H, L	A
A	B, C, D, E, F, K	E
E	G, K, L	G
G	C, D, F, K	K
K	A, B, E, F, H	J
J	ABGHL	L
L	BCH	H

Breadth-first traversal of the graph, beginning at vertex L

L B C F D E K H A J G

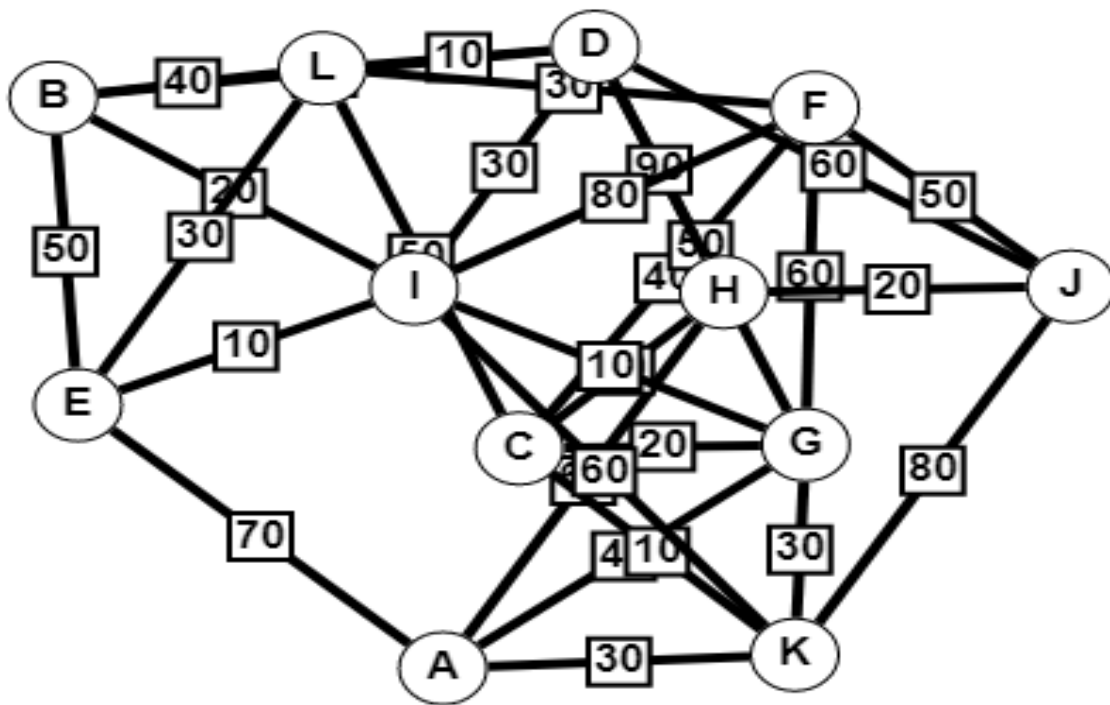
L	CEFI	B
B	AJKL	C
C	ACGK	F
F	ACEK	D
D	ABEH	E

DIJKSTRA'S

Use Dijkstra's shortest path algorithm to find the lowest-cost paths from vertex H to all other vertices.

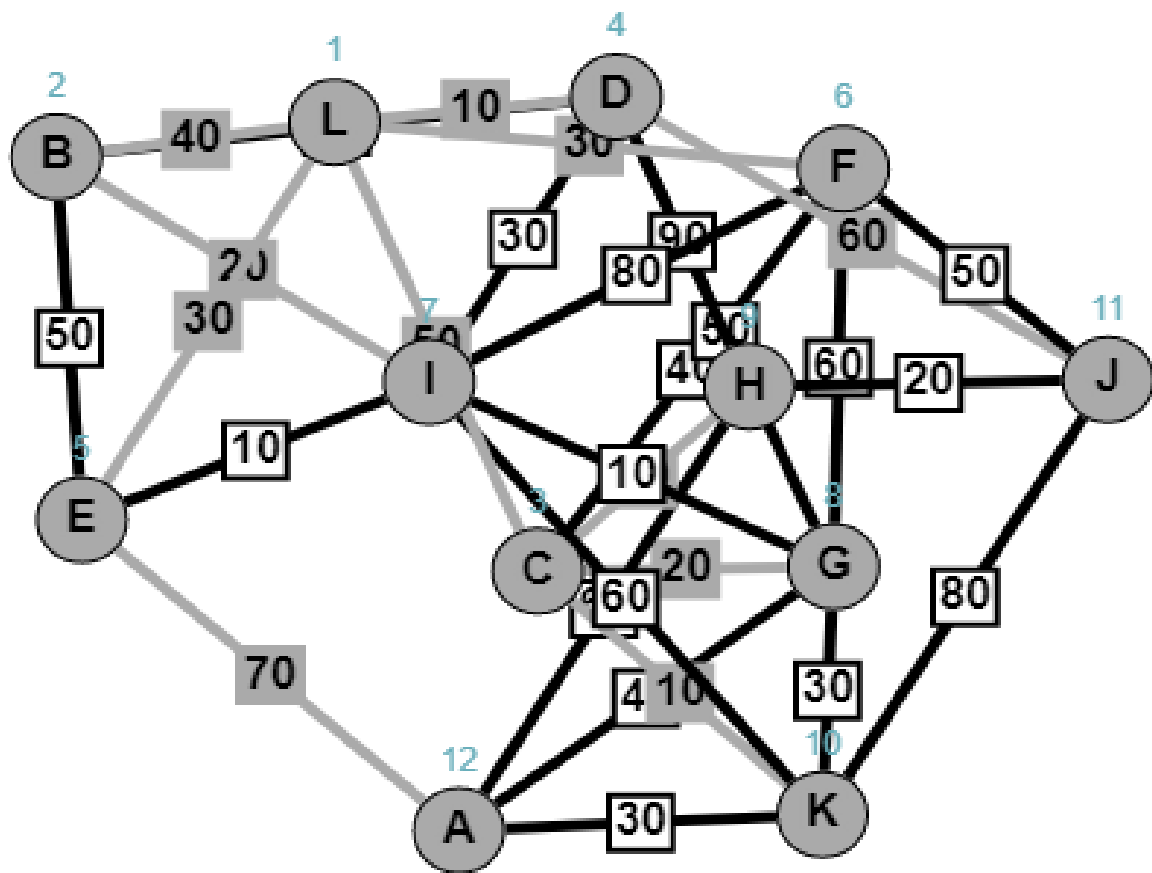
From Vertex H	Path	Costs	Total cost
A	H => E => J => A	10+20+10	40
B	H => J => A => B	10+20+10+40	80
C	H => E => J => A => C	10+20+10+20	60
D	H=> D	50	50
E	H=> E	10	10
F	H => J => A => C => F	10+20+10+30+20	90
G	H => E => J => G	10+20+10	40
H	H		
I	Not connected to anyone		
J	H => E => J	10+20	30
K	H=> E=> J=> A=> B=> K	10+20+10+40+5	85
L	H=> E=> L	10+20	30

GRAPH: 2



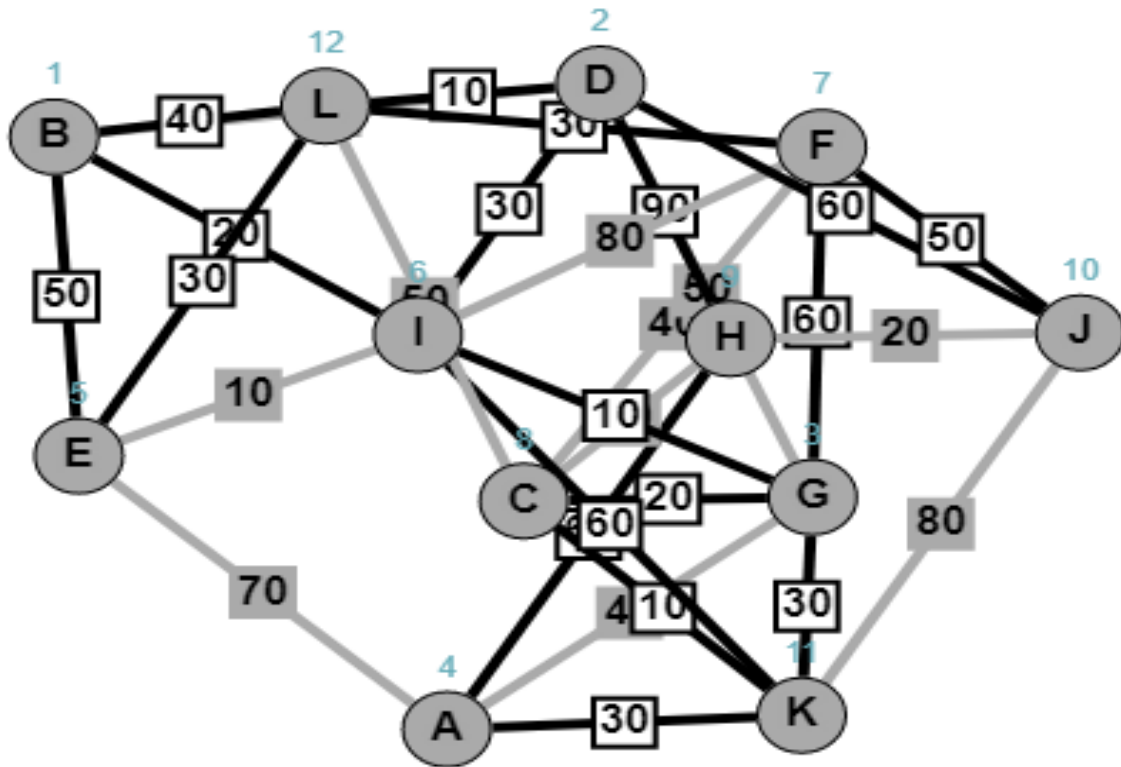
Breadth-first traversal of the graph, beginning at vertex L

LBCDEFIGHKJA



Depth-first traversal of the graph, beginning at vertex B

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



DIJKISTRA'S

Use Dijkstra's shortest path algorithm to find the lowest-cost paths from vertex H to all other vertices.

From Vertex H	Path	Costs	Cost
A	H=>A	80	80
B	H=>C=>G=>I=>B	70+20+10+20	120
C	H=>C	70	70
D	H=>J=>D	20+60	80
E	H=>C=>G=>I=>E	70+20+10+10	110
F	H=>J=>F	20+50	70
G	H=>C=>G	70+20	90
H			
I	H=>C=>G=>I	70+20+10	100
J	H=>J	20	20
K	H=>C=>K	70+10	80
L	H=>J=>D=>L	20+60+10	90