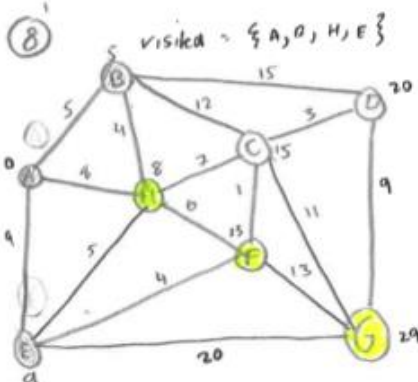
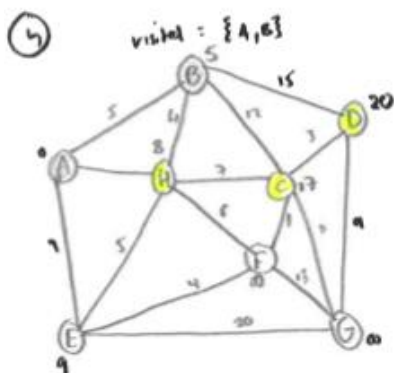
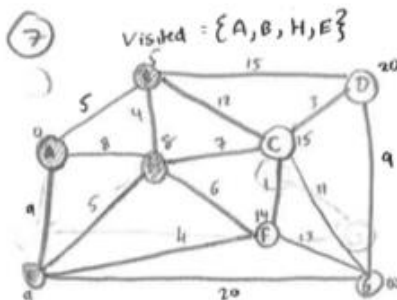
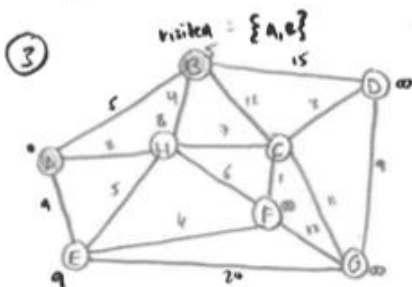
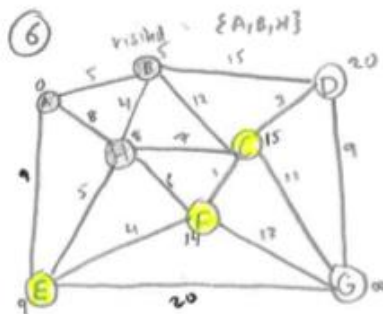
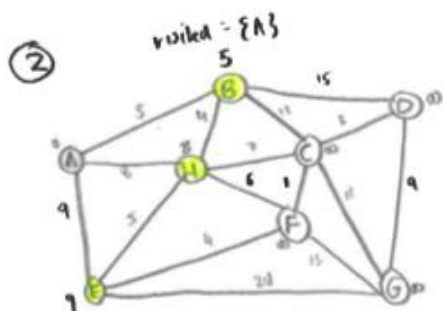
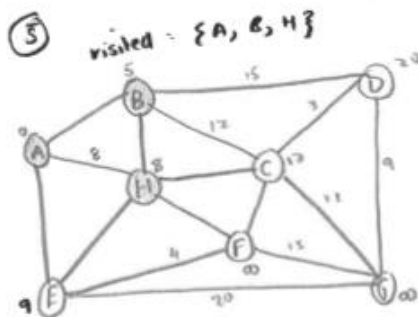
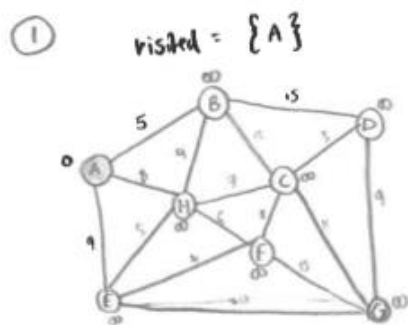
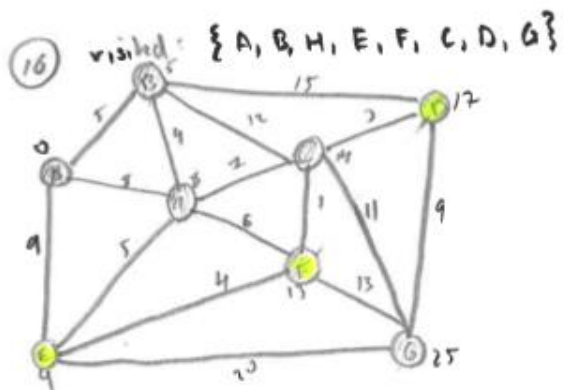
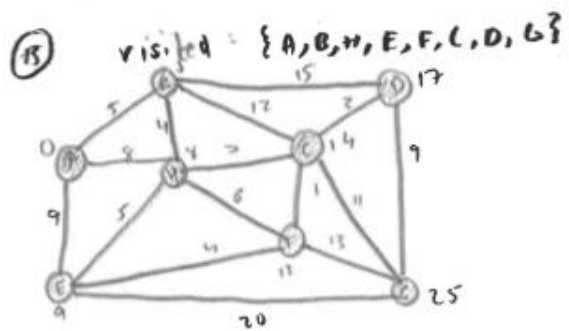
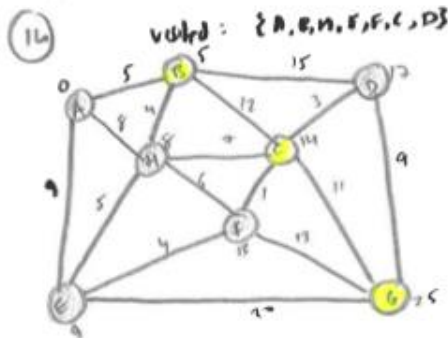
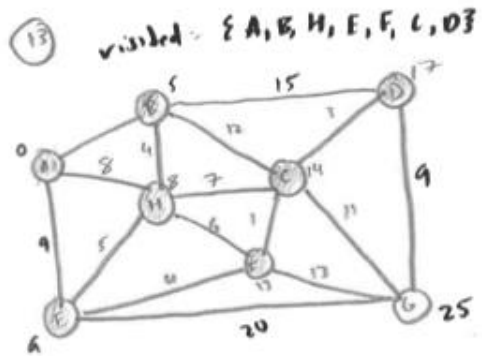
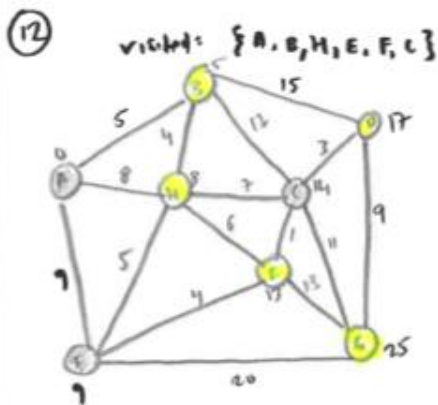
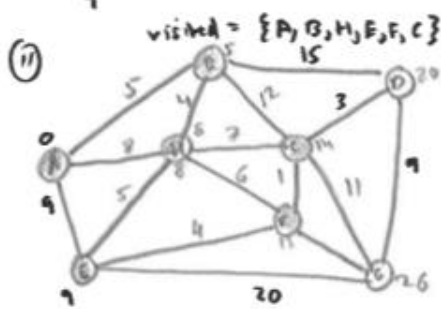
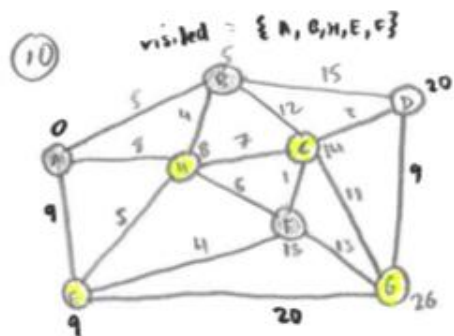
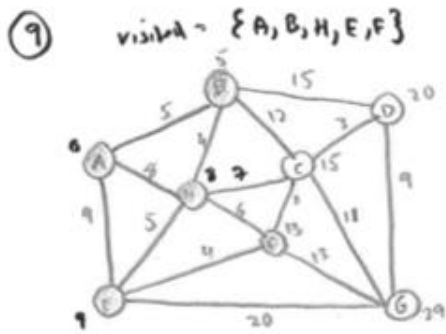


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COMP20230 – Assignment 2

Part 2

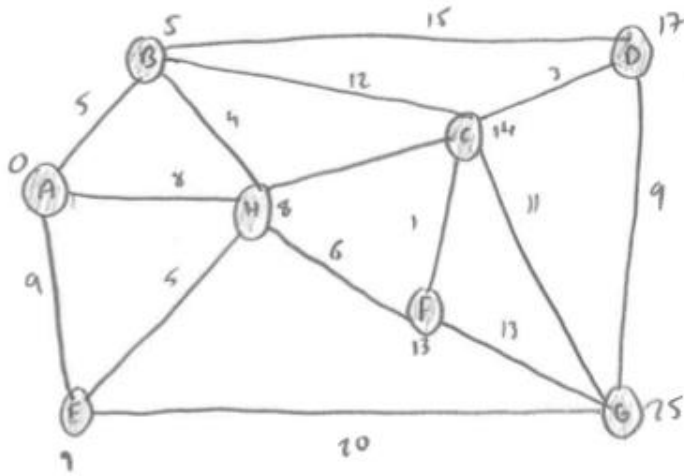
(Visited nodes are shaded & table shows currently known best distance to a node from A.
 Highlighted nodes show the nodes that are in connection with the node currently at)





(17)

visited {A, B, H, E, F, C, D, G}



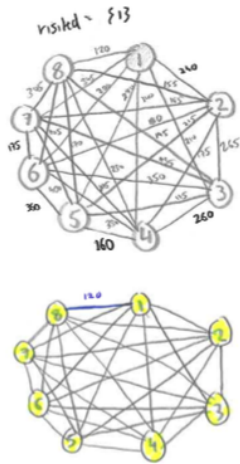
The Best Path to each Node

	A	B	C	D	E	F	G	H
A	0	(A-B)5	∞	∞	(A-E)9	∞	∞	(A-H)8
B	5	0	(B-C)17	(B-D)20	(A-E)9	∞	∞	(A-H)8
H	8	5	(A-H-C)15	(A-B-D)20	(A-E)9	(A-H-F)14	∞	0
E	9	5	(A-H-C)15	(A-B-D)20	0	(A-E-F)13	(A-E-G)24	(A-H)8
F	13	5	(A-E-F-C)14	(A-B-D)20	(A-E)9	0	(A-E-F-G)26	(A-H)8
C	15	5	0	(A-E-F-C)14	(A-E)9	(A-E-F)13	(A-E-F-G)26	(A-H)8
D	20	5	(A-E-F-C)14	0	(A-E)9	(A-E-F)13	(A-E-F-G)26	(A-H)8
G	24	5	(A-E-F-C)14	(A-E-F-C-D)22	(A-E)9	(A-E-F)13	0	(A-H)8

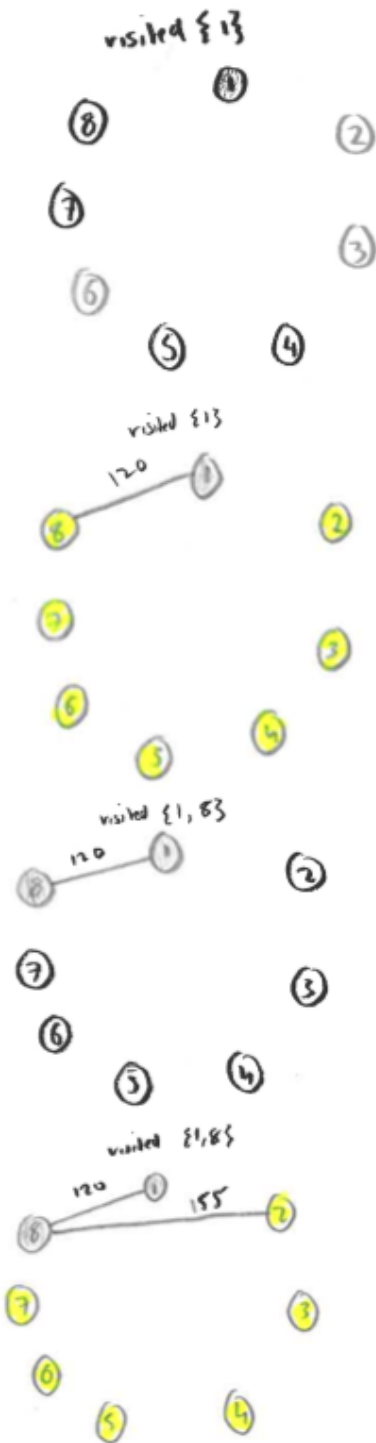
Part 3

Originally tried to do it the same way as done in the lecture slides (first image) but found it inefficient with this problem and hard to read. I changed the way I went about it by making a table and looking for the shortest possible edge available (and one that did not create a loop).

(Visited nodes are shaded, unvisited are unshaded.)



ed.

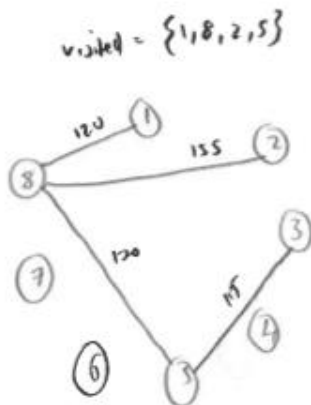
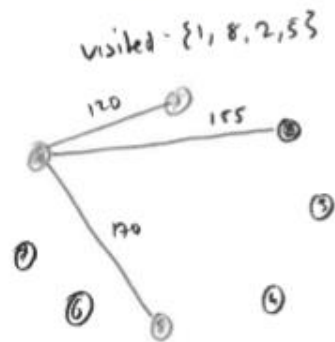
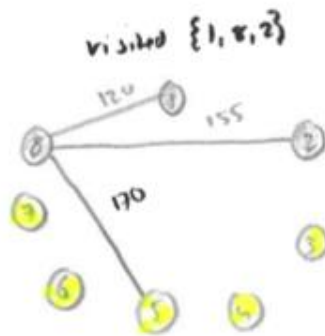
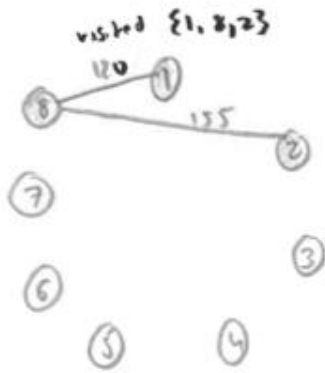


Edges to consider:

Island no.	1	2	3	4	5	6	7	8
1	-	240	210	340	280	200	345	120

Edges to consider

Island no.	1	2	3	4	5	6	7	8
1	-	240	210	340	280	200	345	120
8	120	155	195	230	170	205	305	-



Edges to consider

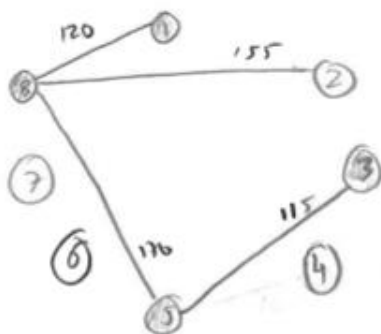
Island no.	1	2	3	4	5	6	7	8
1	-	240	210	210	280	200	345	170
8	170	155	195	230	170	205	305	-
2	240	-	265	175	215	180	185	185

city

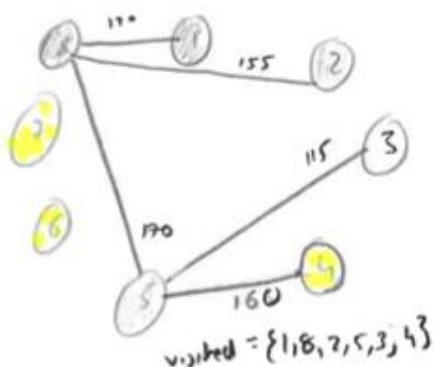
Edges to consider

Island no.	1	2	3	4	5	6	7	8
1	-	240	210	340	280	200	345	170
8	170	155	195	230	170	205	305	-
2	240	-	265	175	215	180	185	185
5	280	215	115	160	-	360	400	170

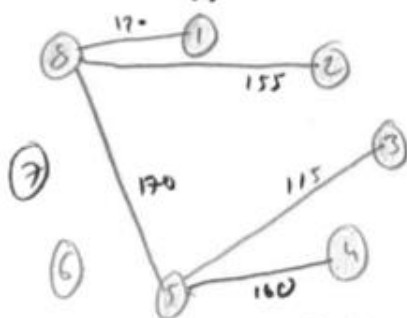
visited: {1, 8, 2, 5, 3}



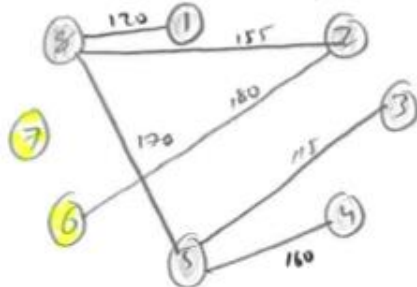
visited: {1, 8, 2, 5, 3}



visited: {1, 8, 2, 5, 3, 4}



visited: {1, 8, 2, 5, 3, 4}



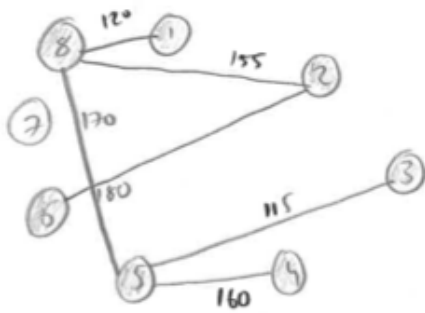
Edges to consider

Edge no.	1	2	3	4	5	6	7	8
1	-	240	210	340	280	200	345	185
8	120	155	195	230	170	205	305	-
2	240	-	265	175	215	180	185	175
5	280	215	175	160	-	360	400	120
3	210	265	-	260	175	350	475	195

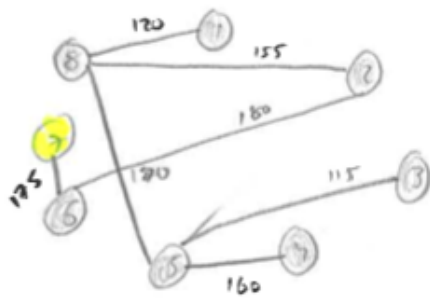
Edges to consider

Edge no.	1	2	3	4	5	6	7	8
1	-	240	210	340	280	200	345	185
8	120	155	195	230	170	205	305	-
2	240	-	265	175	215	180	185	175
5	280	215	175	160	-	360	400	120
3	210	265	-	260	175	350	475	195
4	340	175	260	-	175	330	295	230

visited {1, 8, 2, 5, 3, 4, 6}



visited {1, 8, 2, 5, 3, 4, 6}



Edges to consider:

Edge no	1	2	3	4	5	6	7	8
1	-	240	210	370	280	200	245	175
8	175	175	195	230	175	205	305	-
2	240	-	265	175	215	180	185	155
5	280	215	175	175	-	360	400	170 (includ)
3	210	265	-	260	175	350	435	175
4	370	includ	260	-	175	320	245	230
6	200	180	350	330	360	-	175	205

visited {1, 8, 2, 5, 3, 4, 6, 7}

