

↓, $V(\text{State Graph}) = \{\text{Alaska, California, Hawaii, New York, Oregon, Texas, Vermont}\}$
 $E(\text{State Graph}) = \{(\text{Alaska, Oregon}), (\text{Hawaii, Alaska}), (\text{Hawaii, California}), (\text{Hawaii, New York}), (\text{Hawaii, Texas}), (\text{Texas, Hawaii}), (\text{Texas, Vermont}), (\text{Vermont, Alaska}), (\text{Vermont, California}), (\text{New York, Vermont}), (\text{New York, California}), (\text{New York, Texas}), (\text{California, New York}), (\text{California, Hawaii}), (\text{California, Texas}), (\text{Oregon, Hawaii}), (\text{Oregon, Texas}), (\text{Texas, Oregon}), (\text{Texas, California}), (\text{Texas, New York}), (\text{Vermont, Texas}), (\text{Vermont, New York}), (\text{Vermont, California}), (\text{Vermont, Oregon}), (\text{Alaska, Vermont}), (\text{Alaska, California}), (\text{Alaska, New York}), (\text{Alaska, Texas}), (\text{Alaska, Oregon}), (\text{Alaska, Hawaii}), (\text{Oregon, Alaska}), (\text{Oregon, California}), (\text{Oregon, New York}), (\text{Oregon, Texas}), (\text{Oregon, Vermont}), (\text{California, Oregon}), (\text{California, Alaska}), (\text{California, Hawaii}), (\text{California, New York}), (\text{California, Texas}), (\text{New York, California}), (\text{New York, Oregon}), (\text{New York, Alaska}), (\text{New York, Hawaii}), (\text{New York, Texas}), (\text{Texas, New York}), (\text{Texas, California}), (\text{Texas, Oregon}), (\text{Texas, Alaska}), (\text{Texas, Hawaii}), (\text{Texas, Vermont}), (\text{Vermont, Texas}), (\text{Vermont, New York}), (\text{Vermont, California}), (\text{Vermont, Oregon}), (\text{Vermont, Alaska}), (\text{Vermont, Hawaii})\}$

2. a) No
 b) Yes
 c) Texas

3. a) States

| | AL | CA | HI | NY | OR | TX | VT |
|----|----|----|----|----|----|----|----|
| AL | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| CA | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| HI | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OR | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| TX | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| VT | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

b) $AL \rightarrow OR \rightarrow$

$CA \rightarrow$

$HI \rightarrow AL \rightarrow CA \rightarrow NY \rightarrow TX \rightarrow$

$NY \rightarrow$

$OR \rightarrow$

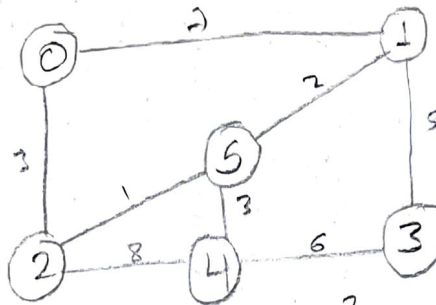
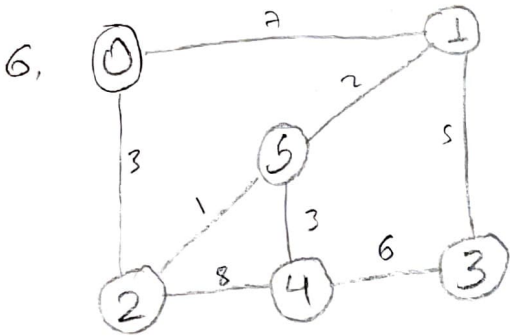
$TX \rightarrow HI \rightarrow VT \rightarrow$

$VT \rightarrow AL \rightarrow CA \rightarrow$

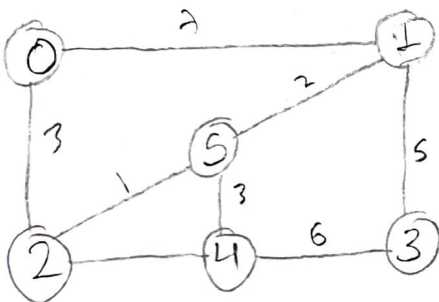
4. a) Answer: c) E G A D F C B

b) Answer: A) F, C, D, A, B, E, G

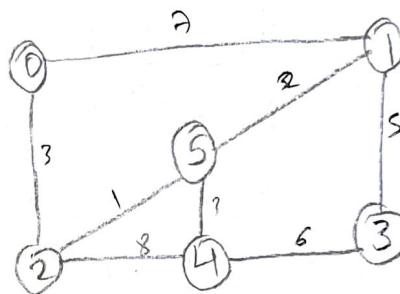
- 5, Atlanta \rightarrow Austin = 2100
 Atlanta \rightarrow Chicago = 2800
 Atlanta \rightarrow Dallas = 1900
 Atlanta \rightarrow Denver = 2680
 Atlanta \rightarrow Houston = 800
 Atlanta \rightarrow Washington = 600



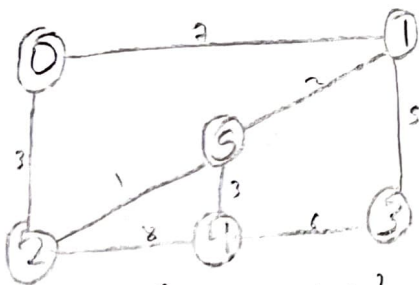
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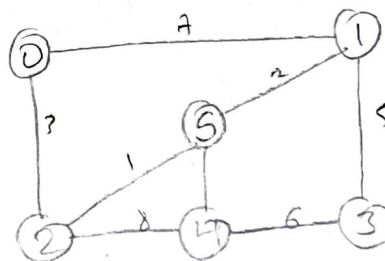
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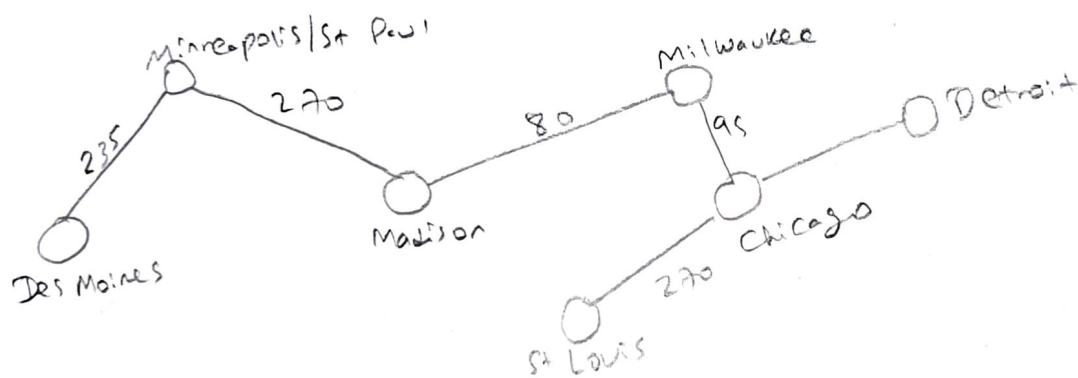
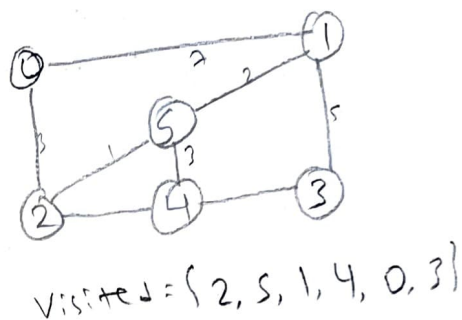
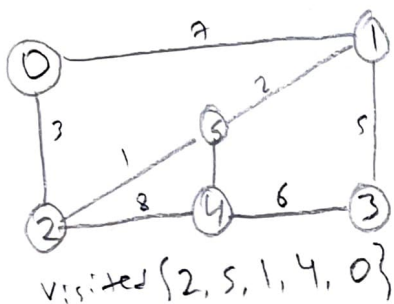
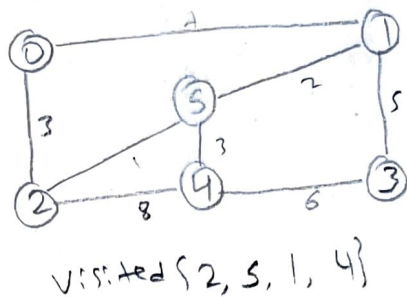
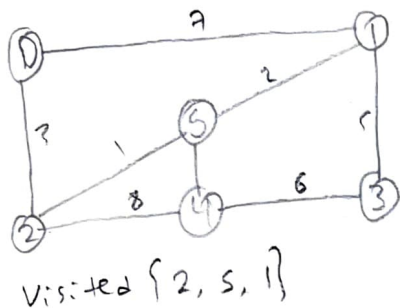
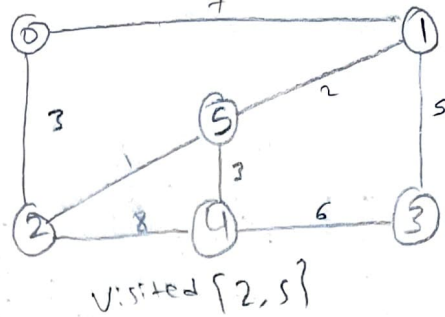
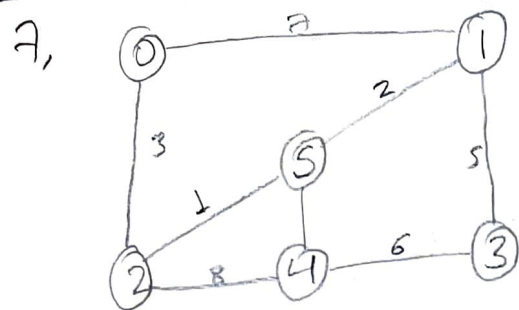
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Visited {0, 2, 5, 1, 4, 3}



Topological: 0, 5, 1, 8, 6, 3, 2, 4, 9, 7

Breadth First Topological:

Start, Programming 1, Discrete Math, Computer Organization, Programming 2, Operations Systems, High level languages, Algorithms, Senior Seminar, Theory of Computation, end.