

Assignment_6

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1 Assignment 6

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1.1 Exercise 1

Adjacency-list representation $1 \rightarrow 2 \rightarrow 3$

$2 \rightarrow 1 \rightarrow 4 \rightarrow 5$

$3 \rightarrow 1 \rightarrow 6 \rightarrow 7$

$4 \rightarrow 2$

$5 \rightarrow 2$

$6 \rightarrow 3$

$7 \rightarrow 3$

Adjacency-matrix representation

	1	2	3	4	5	6	7
1	0	1	1	0	0	0	0
2	1	0	0	1	1	0	0
3	1	0	0	0	0	1	1
4	0	1	0	0	0	0	0
5	0	1	0	0	0	0	0
6	0	0	1	0	0	0	0
7	0	0	1	0	0	0	0

1.2 Exercise 2

1.2.1 2.1

Breadth First Search traversal with queue Step 1

Visited	A	-	-	-	-	-
Queue	A	-	-	-	-	-

Step 2

Visited	A	B	C	-	-	-
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Queue	B	C	-	-	-	-
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Step 3

Visited	A	B	C	D	E	-
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Queue	C	D	E	-	-	-
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Step 4

Visited	A	B	C	D	E	F
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Queue	D	E	F	-	-	-
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Step 5

Visited	A	B	C	D	E	F
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Queue	E	F	-	-	-	-
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Step 6

Visited	A	B	C	D	E	F
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Queue	F	-	-	-	-	-
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Step 7

Visited	A	B	C	D	E	F
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Queue	-	-	-	-	-	-
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1.2.2 2.2

Depth First Search traversal with stack Step 1

Visited	A	-	-	-	-	-
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Stack	B	C	-	-	-	-
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Step 2

Visited	A	B	-	-	-	-
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Stack	D	E	C	-	-	-
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Step 3

Visited	A	B	D	-	-	-
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Stack	E	C	-	-	-	-
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Step 4

Visited	A	B	D	E	-	-
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Stack	C	-	-	-	-	-
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Step 5

Visited	A	B	D	E	C	-
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Stack	F	-	-	-	-	-
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Step 6

Visited	A	B	D	E	C	F
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Stack	-	-	-	-	-	-
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