CMPSC 132 Lab 10 - Traversals, Heaps and Hash Tables

Matthew Schaeffer

TOTAL POINTS

8.45 / 10

QUESTION 1

Question 1 0.5 pts

1.1 Question 1.a 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

+ **0.05 pts** Partial credit

1.2 Question 1.b 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

+ **0.05 pts** Partial credit

1.3 Question 1.c 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

+ **0.05 pts** Partial credit

1.4 Question 1.d 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

+ **0.05 pts** Partial credit

1.5 Question 1.e 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

+ **0.05 pts** Partial credit

1.6 Question 1.f 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

+ **0.05 pts** Partial credit

1.7 Question 1.g 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

1.8 Question 1.h 0.0625 / 0.0625

✓ + **0.0625 pts** Correct

- **0.0625 pts** Incorrect

QUESTION 2

Question 2 1 pts

2.1 BFS 0.25 / 0.25

✓ + **0.25 pts** Correct

- **0.25 pts** Incorrect

+ **0.1 pts** Partial credit

2.2 Preorder 0.25 / 0.25

✓ + **0.25 pts** Correct

- **0.25 pts** Incorrect

+ **0.1 pts** Partial credit

2.3 Inorder 0.25 / 0.25

✓ + **0.25 pts** Correct

- **0.25 pts** Incorrect

+ **0.1 pts** Partial credit

2.4 Postorder 0.25 / 0.25

✓ + **0.25 pts** Correct

- **0.25 pts** Incorrect

+ **0.1 pts** Partial credit

QUESTION 3

3 Question 3 1 / 1

✓ + **1 pts** Correct

- **1 pts** Incorrect

+ **0.75 pts** Partial credit

+ **0.25 pts** Partial credit

+ **0.5 pts** Partial credit

QUESTION 4

4 Question 4 0.15 / 0.5

   + **0.5 pts** Correct

   - **0.5 pts** Incorrect

   + **0.25 pts** Partial credit

✓ + **0.15 pts** **Partial credit**

5 Question 5 0.75 / 1

   + **1 pts** Correct

   - **1 pts** Incorrect

✓ + **0.75 pts** **Partial credit**

   + **0.25 pts** Partial credit

💬 incorrect subtree for '+' and '-' In the left subtree of root node

Question 6 1 pts

6.1 BFS Tree 0.5 / 0.5

✓ + **0.5 pts** **Correct**

   - **0.5 pts** Incorrect

   + **0.25 pts** Partial credit

6.2 DFS Tree 0.5 / 0.5

✓ + **0.5 pts** **Correct**

   - **0.5 pts** Incorrect

   + **0.25 pts** Partial credit

Question 7 1 pts

7.1 Table 0.7 / 0.7

✓ + **0.7 pts** **Correct**

   - **0.7 pts** Incorrect

   + **0.6 pts** Partial credit

   + **0.5 pts** Partial credit

   + **0.4 pts** Partial credit

7.2 Path 0.15 / 0.15

✓ + **0.15 pts** **Correct**

7.3 Cost 0.15 / 0.15

✓ + **0.15 pts** **Correct**

Question 8 1 pts

8.1 Value 1 0.1 / 0.1

✓ + **0.1 pts** **Correct**

   - **0.1 pts** Incorrect

   + **0.05 pts** Partial credit

8.2 Rest of table 0.9 / 0.9

✓ + **0.9 pts** **Correct**

Question 9 1 pts

9.1 Value 1 0.05 / 0.05

✓ + **0.05 pts** **Correct**

   - **0.05 pts** Incorrect

   + **0.025 pts** Partial credit

9.2 Value 2 0.025 / 0.05

   + **0.05 pts** Correct

   - **0.05 pts** Incorrect

✓ + **0.025 pts** **Partial credit**

9.3 Value 3 0.05 / 0.1

   + **0.1 pts** Correct

   - **0.1 pts** Incorrect

✓ + **0.05 pts** **Partial credit**

9.4 Value 4 0.05 / 0.1

   + **0.1 pts** Correct

   - **0.1 pts** Incorrect

✓ + **0.05 pts** **Partial credit**

9.5 Value 5 0.1 / 0.1

✓ + **0.1 pts** **Correct**

   - **0.1 pts** Incorrect

   + **0.05 pts** Partial credit

9.6 Rest of the table 0.25 / 0.6

+ **0.6 pts** Correct

- **0.6 pts** Incorrect

+ **0.4 pts** Partial credit

✓ + **0.25 pts** **Partial credit**

QUESTION 10

Question 10 1 pts

10.1 Value 1 0.1 / 0.1

✓ + **0.1 pts** **Correct**

- **0.1 pts** Incorrect

+ **0.05 pts** Partial credit

10.2 Value 2 0.05 / 0.1

+ **0.1 pts** Correct

- **0.1 pts** Incorrect

✓ + **0.05 pts** **Partial credit**

10.3 Value 3 0.1 / 0.1

✓ + **0.1 pts** **Correct**

- **0.1 pts** Incorrect

+ **0.05 pts** Partial credit

10.4 Value 4 0.025 / 0.05

+ **0.05 pts** Correct

- **0.05 pts** Incorrect

✓ + **0.025 pts** **Partial credit**

10.5 Value 5 0 / 0.05

+ **0.05 pts** Correct

✓ - **0.05 pts** **Incorrect**

10.6 Rest of the table 0.25 / 0.6

+ **0.6 pts** Correct

- **0.6 pts** Incorrect

+ **0.4 pts** Partial credit

✓ + **0.25 pts** **Partial credit**

QUESTION 11

Question 11 1 pts

11.1 Value 1 0.05 / 0.05

✓ + **0.05 pts** **Correct**

- **0.05 pts** Incorrect

+ **0.025 pts** Partial credit

11.2 Value 2 0.05 / 0.05

✓ + **0.05 pts** **Correct**

- **0.05 pts** Incorrect

+ **0.025 pts** Partial credit

11.3 Value 3 0.1 / 0.1

✓ + **0.1 pts** **Correct**

- **0.1 pts** Incorrect

+ **0.05 pts** Partial credit

11.4 Value 4 0.1 / 0.1

✓ + **0.1 pts** **Correct**

- **0.1 pts** Incorrect

+ **0.05 pts** Partial credit

11.5 Value 5 0.1 / 0.1

✓ + **0.1 pts** **Correct**

- **0.1 pts** Incorrect

+ **0.05 pts** Partial credit

11.6 Rest of the table 0.6 / 0.6

✓ + **0.6 pts** **Correct**

- **0.6 pts** Incorrect

+ **0.4 pts** Partial credit

+ **0.25 pts** Partial credit

ıl gradescope

Matthew Schaeffer

Question 1

a) /user/rt/courses/	b) cs016/ and cs252/	**c)** 3 children nodes
d) projects/	e) grades and program/	f) children-nodes(pr1, pr2, pr3)
g) 3	h) 4	

Question 2
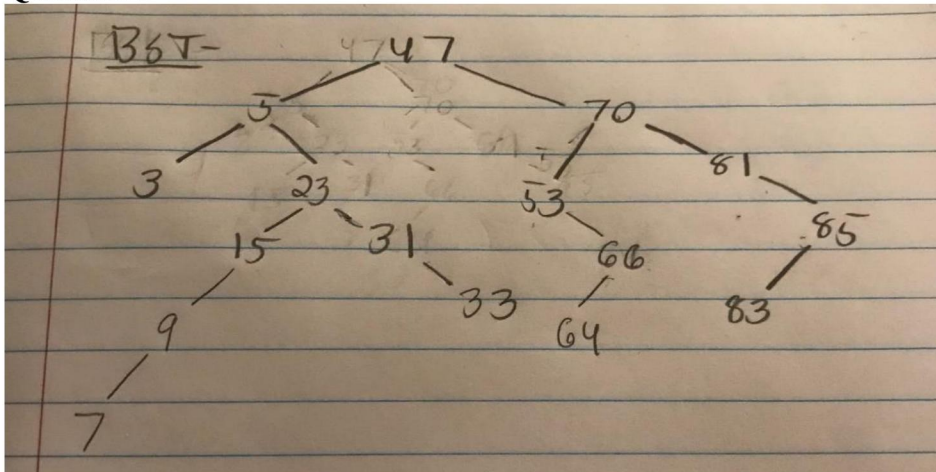
| BSF: [47,5,70,3,23,53,81,15,31,66,85,9,33,64,83,7] |
|---|
| Preorder: [47,5,3,23,15,9,7,31,33,70,53,66,64,81,85,83] |
| Inorder: [3,5,7,9,15,23,31,33,47,53,64,66,70,81,83,85] |
| Postorder: [3,7,9,15,33,31,23,5,64,66,53,83,85,81,70,47] |

Question 3

Array representation:

0	1	2	3	4	5	6	7	8	9	10	11	12	13
	=4	4	2	5	6	3	7	12	8	17	70	9	66

Question 4

Array representation:

0	1	2	3	4	5	6	7	8	9	10
	70	4	2	5	6	3	7	12	8	17

Question 5

Expression Tree:
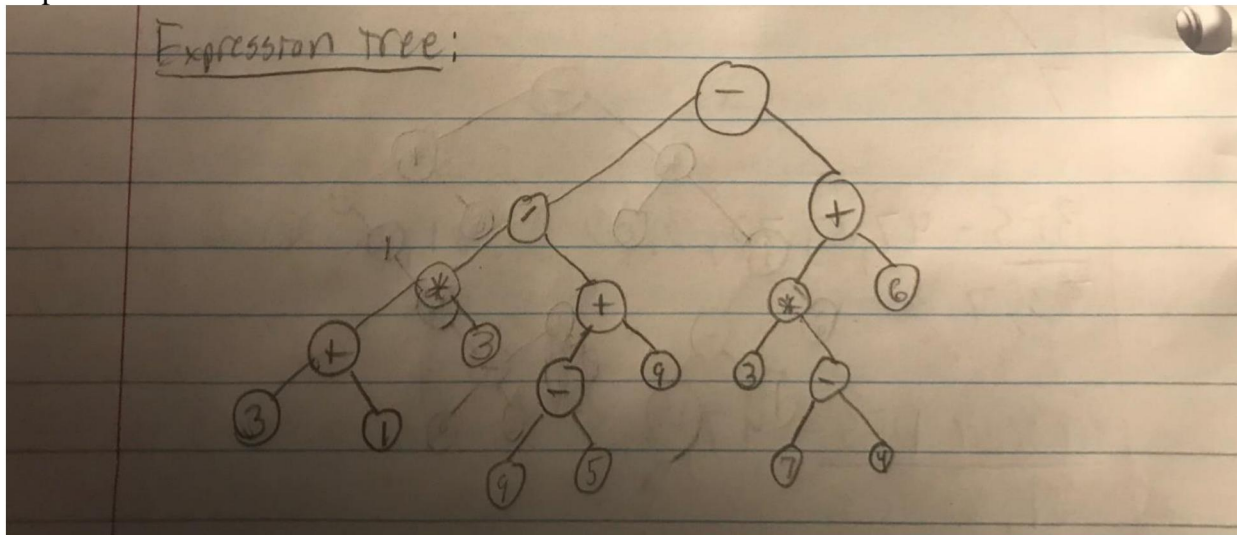
Question 6

BSF Tree starting at node D:	DSF Tree starting at node E
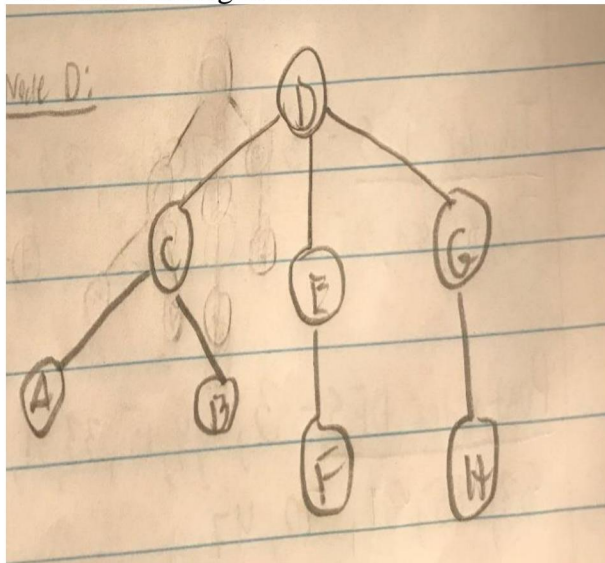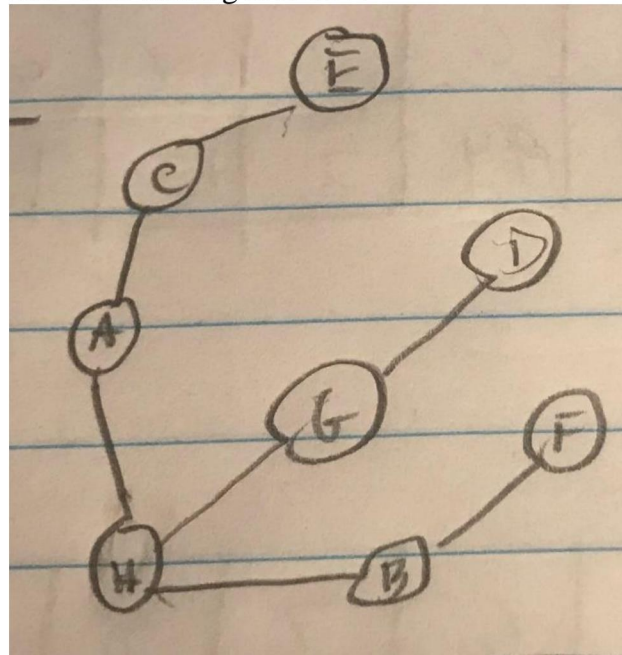
Question 7

Node	Shortest distance from A	Previous Node
A	0	A
B	Infinity, 7	A
C	Infinity, 11	D
D	Infinity, 9	A
E	Infinity, 20	C
F	Infinity, 20	D

Shortest Path A to C: A->D->C	Cost: 11

Question 8

0	1	2	3	4	5	6	7	8	9	10
13	94 39	None	None	None	44 88 11	None	None	12 23	16 5	20

Question 9

0	1	2	3	4	5	6	7	8	9	10
13	88	16	94	11	44	39	5	12	20	23

Question 10

0	1	2	3	4	5	6	7	8	9	10
13	88	39	20	16	44	94	5	12	11	23

Question 11

0	1	2	3	4	5	6	7	8	9	10
13	94	23	88	39	44	11	5	12	16	20