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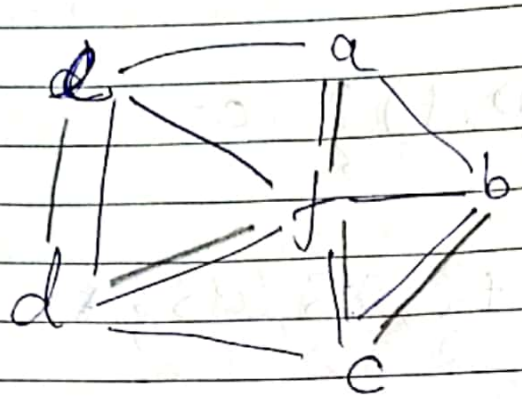
Homework - 1

1.1



I have taken (a, f) (b, c), (f, c), (d, f) and (d, e) as edges as these have the minimum cost.

$E' = \{\}$ $c = 0$

$A = \{\{a\}, \{b\}, \{c\}, \{d\}, \{e\}, \{f\}\}$

$E' = \{(b, c)\}$ $c = 2$

$A = \{\{b, c\}, \{a\}, \{d\}, \{e\}, \{f\}\}$

$E' = \{(b, c), (a, f)\}$ $c = 3$

$A = \{\{b, c\}, \{a, f\}, \{d\}, \{e\}\}$

$E' = \{(b, c), (a, f), (d, f)\}$ $c = 7$

$A = \{\{b, c\}, \{a, f, d\}, \{e\}\}$

$E' = \{(b, c), (a, f), (d, f), (d, e)\}$ $c = 12$

$A = \{\{b, c\}, \{a, f, d, e\}\}$

$E' = \{(b, c), (a, f), (d, f), (d, e), (d, f)\}$ $c = 15$

$A = \{\{a, b, c, d, e, f\}\}$

So the minimum cost is 15.

10.2 (a) t = F F L F L F R F R F F L F R F

p = F F L F R

F F L F L F R F R F F L F R F

F F L F R

F F ≠ ≠ R

F ≠ ≠ ≠ R

F F ≠ ≠ R

F ≠ ≠ ≠ R

F F ≠ ≠ R

F ≠ ≠ ≠ R

F F ≠ ≠ R

F ≠ ≠ ≠ R

F F L F R

10 alignments and 22 comparisons.

(b) F F L F L F R F R F F L F R F

F F L F R
F F L F R

F F L F R
F F L F R

F F L F R
F F L F R

6 alignments and 16 comparisons.

1.3 (a) The compiler will shown an error because it does not know which operator to execute first

Eg 2 < 3 < 4

(b) (^) 2 $(*) 5 $(+) 23

2^[5 * (2+3)]

2^[25] = 33554432.

1.2 (C)

	F	F	L	F	R
	0	1	2	3	4
L	0	1	-	0	1
R	0	1	2	3	-
F	-	-	0	-	0
P	0	1	2	3	4