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Lab 4 BlackBox & WhiteBox Testing

Problem 1

Input

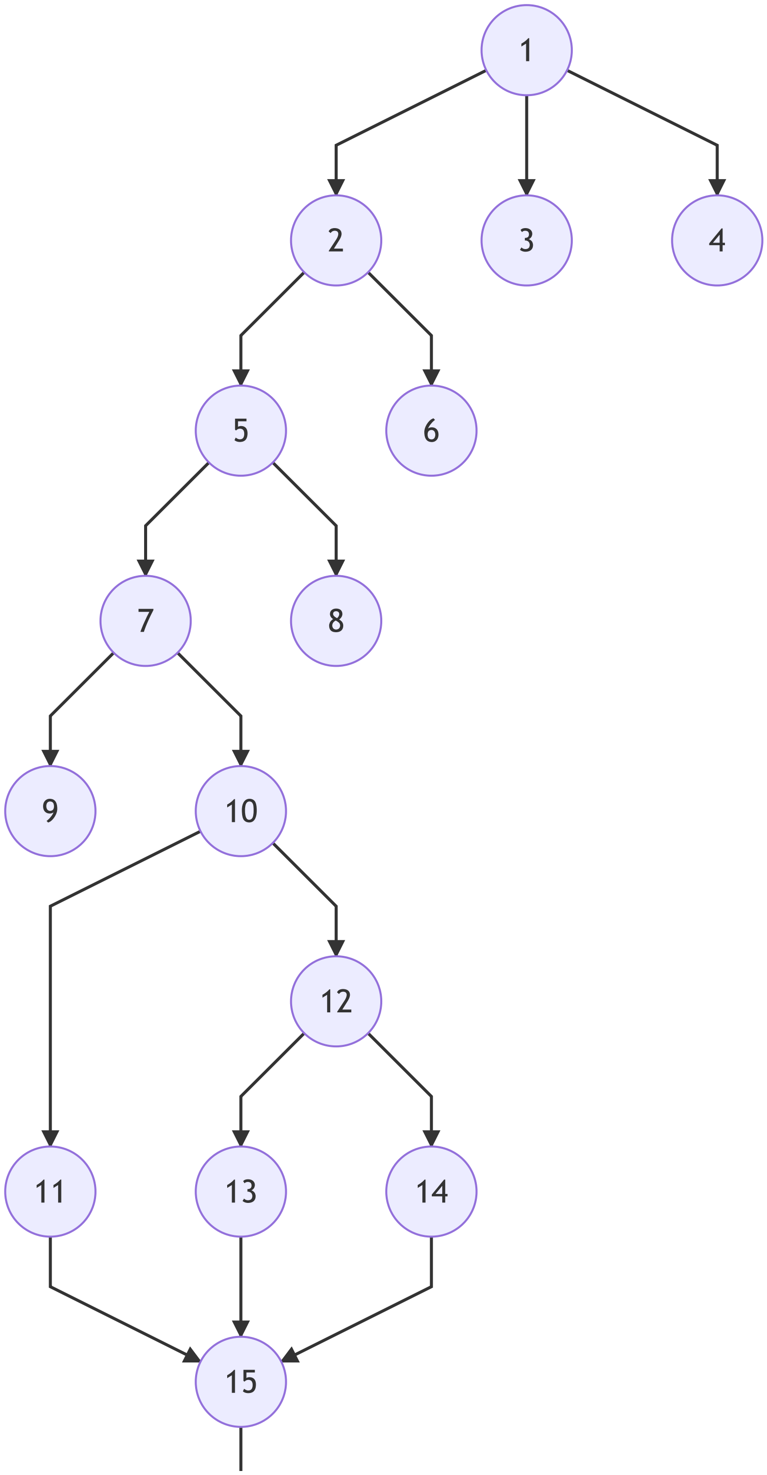
Case #	Description	Input
1	a valid case	39223 18 10 10 10 101
2	total size too large case	39227 33 20 20 20 105
3	one dimension too large case	39225 33 40 10 10 104
4	weight too big case	39226 60 10 10 10 109
5	unknown zone case	39229 18 10 10 10 200
6	unknown\corrupted input case	NULL a 12

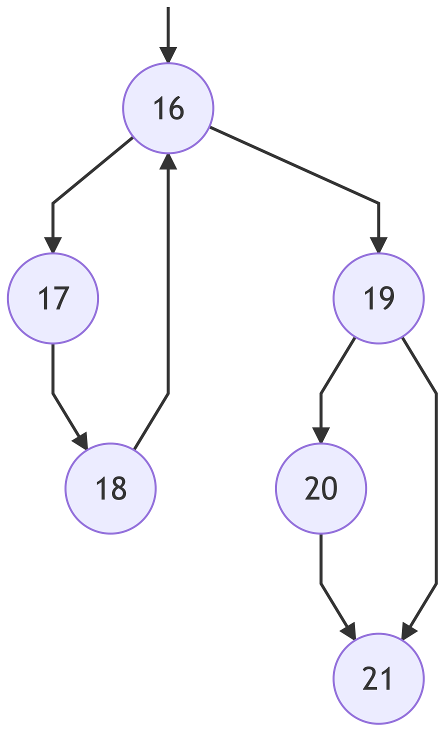
Output

Transaction #	Weight	Zone	Charge	Rejection Message
39223	18	101	36.50	
39227	-	-	-	Size too large.
39225	-	-	-	Size too large.
39226	-	-	-	Weight too large.
39229	18	-	-	Unknown zone.
-	-	-	-	Unknown input.
1 packages accepted.				

Transaction #	Weight	Zone	Charge	Rejection Message
4 packages rejected.				
1 input was unknown				

Problem 2





1: if income input is valid

2: if income is smaller than 0

3: income is not a valid number

4: some IO error occurred

5: if nFamilyMembers input is valid

6: program terminated

7: if nFamilyMembers <= 0

8: some IO error occurred

9: program terminated

10: if income < 10000

11: taxTotal=0.12*income

12: if income < 50000

13: taxTotal=300+0.24*(income-10000)

14: taxTotal=1500+0.36*(income-50000)

15: i=0

16: if i<= nFamilyMembers

17: toxTotal = taxTotal - 100

18: i++

19: if taxTotal < 0

20: taxTotal = 0

21: print the result

- there is a total of 11 paths

	Income						nFamilyMembers		taxTotal	
	<10000	<50000	>50000	<0	Invalid	IO error	IO error	<=0	<0	>0
1					X					
2						X				
3				X						
4							X			
5								X		
6	X								X	
7	X									X
8		X							X	
9		X								X
10			X						X	
11			X							X

Path#	Path	Test case
1	1->3	Income="asd"
2	1->4	Break IOstream
3	1->2->6	Income = -1
4	1->2->5->8	Income = 1000 Break IOstream

5	1->2->5->7->9	Income = 1000
		nFamilyMembers = -1

6	1->2->5->7->10->11->15->16->17->18->19->20->21	Income = 100
		nFamilyMembers = 5

7	1->2->5->7->10->11->15->16->17->18->19->21	Income = 9000
		nFamilyMembers = 1

Path#	Path	Test case

8	1->2->5->7->10->12->13->15->16->17->18->19->20->21	Income = 10000
		nFamilyMembers = 5

9	1->2->5->7->10->12->13->15->16->17->18->19->21	Income = 49000
		nFamilyMembers = 10

10	1->2->5->7->10->12->14->15->16->17->18->19->20->21	Income = 50000
		nFamilyMembers = 20

11	1->2->5->7->10->12->14->15->16->17->18->19->21	Income = 100000
		nFamilyMembers = 10

- the program has no errors