CENG437 - Software Quality Management Homework#4

	Factors		
Runs	**1**	**2**	**3**
1	0	0	0
2	0	1	1
3	0	2	2
4	0	3	2
5	0	0	1
6	0	1	0
7	1	2	0
8	1	3	1
9	1	0	2
10	1	1	2
11	1	2	1
12	1	3	0

Figure 1(Orthogonal Array)

As the result of orthogonal array method (Figure 1) I reduce total test cases from 24 to 12.The Factor 1 represent X and 0, 1 represent False and True. Factor 2 is Y where 0, 1, 2, 3 is equal to 0, 1, 2, 3.Factor 3 means Z where 0, 1, 2 represents P, Q, R values.

In parameter order;

Step 1;

T =	T,0	F,0
	T,1	F,1
	T,2	F,2
	T,3	F,3

Step 2;

Π =	T,P	T,Q	T,R
	F,P	F,Q	T,R
	0,P	0,Q	0,R
	1,P	1,Q	1,R
	2,P	2,Q	2,R
	3,P	3,Q	3,R

Step 3;

T =	T,0,P	F,0,Q
	T,1,Q	F,1,P
	T,2,P	F,2,R
	T,3,R	F,3,P

π =			
			0,R
			1,R
		2,Q	
		3,Q	

Step 4;

If we add (T, 0, R), (T, 1, R), (F, 2, Q), (F, 3, Q) pairs, we Get our final test suite.

T =	T,0,P
	T,1,Q
	T,2,P
	T,3,R
	F,0,Q
	F,1,P
	F,2,R
	F,3,P
	T,0,R
	T,1,R
	F,2,Q
	F,3,Q

	Factors		
Runs	**1**	**2**	**3**
1	0	0	0
2	0	1	1
3	0	2	2
4	0	3	2
5	0	0	1
6	0	1	0
7	1	2	0
8	1	3	1
9	1	0	2
10	1	1	2
11	1	2	1
12	1	3	0
Ortagonal Array			

	Factors		
Runs	**1**	**2**	**3**
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2	0	1	0
3	0	2	2
4	0	3	0
5	0	2	1
6	0	3	1
7	1	0	0
8	1	0	2
9	1	1	1
10	1	1	2
11	1	2	0
12	1	3	2
Ortagonal Array of In parameter order			

As we can see there is some different test cases but this cases also cover all test cases.

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