

Ranked fix patterns

Nowack et al.

Fix patterns ranked by the number of their occurrence in Defects4J. Only the patterns with at least 3 occurrences are shown.

	Fix patterns	Occurrences
1	FP15.2	247
2	FP10.1:	86
3	FP15.1 + FP6.2	68
4	FP13.1	32
5	FP6.3	28
6	Mutate Object and Method (FP13.1.4): - obj1.method1() + obj2.method2(obj1)	22
7	Mutate Variable (FP13.3): - var + new instance	16
8	FP4.4	14
9	FP11.1: - ...exp1 Op1 exp2... + ...exp1 Op2 exp2...	11
10	FP9.1	11
11	FP14	10
12	Mutate Variable (FP13.4): - var + method(var, ...)	10
13	Insert Zero Checker (FP4.4.1): + if (var != 0) { statement; ... + }	10
14	FP2.1	9
15	Insert Declaration with Initialisation (FP4.7): + mod T var = literal	8

	Fix patterns	Occurrences
16	Insert Declaration without Init. (FP4.8): + T var	7
17	Insert Field Init. (FP4.6): + obj.field = var	7
18	Mutate Object (FP13.1.1): - obj.attr + var	7
19	Insert Null Pointer Checker (FP2.6.1): + if (exp == null) return null;	7
20	FP2.2	6
21	FP16	5
22	Mutate Method (FP10.6): - method + var	5
23	Insert Case (FP4.9): + case exp	4
24	FP13.1.5	4
25	FP2.6	4
26	FP13.2	4
27	FP4.1	3
28	FP4.5.1	3
29	FP4.4.2	3
30	FP15.1.1	3
31	FP7.1: - T1 var ...; + T2 var ...;	3