

Table 1: Activation Properties (out of 185 activities)

Property	# of Activities (%)	Reasons
1. Exported	31 (16.8%)	2. Alternate entry (29)
		3.2. Information (2)
		4.2. Disabled for all end-users (1)
		6.1. Software (1)
		7. Environment (1)
		8. Usage patterns (1)
2. Activation Location	185 (100%)	
Code	149 (80.5%)	
GUI/lifecycle	114 (61.6%)	1. Server (20)
		2. Alternate entry (15)
		3.1. Equipment (12)
		3.2. Information (14)
		4.1. Disabled for app version (26)
		4.2. Disabled for all end-users (9)
		5. Error handling (11)
		6.1. Software (9)
		6.2. Hardware (9)
		7. Environment (7)
		8. Usage patterns (3)
Other Android	25 (13.5%)	1. Server (13)
		2. Alternate entry (1)
		3.2. Information (2)
		4.1. Disabled for app version (1)
		5. Error handling (9)
		6.1. Software (2)
		6.2. Hardware (1)
		7. Environment (1)
App-specific	10 (5.4%)	1. Server (9)
		3.1. Equipment (1)
		5. Error handling (1)
Manifest	36 (19.5%)	2. Alternate entry (34)
		3.1. Equipment (1)
		3.2. Information (2)
		4.2. Disabled for all end-users (1)
		6.1. Software (1)
3. Activation Guards	138 (74.6%)	
Enforcement	138 (74.6%)	
In Code	117 (63.2%)	1. Server (32)
		2. Alternate entry (12)
		3.1. Equipment (13)
		3.2. Information (14)
		4.1. Disabled for app version (15)
		4.2. Disabled for all end-users (5)
		5. Error handling (20)
		6.1. Software (11)
		6.2. Hardware (9)
		7. Environment (7)
		8. Usage patterns (3)
In Resources	21 (11.4%)	1. Server (39)
		2. Alternate entry (35)
		3.1. Equipment (5)
		3.2. Information (15)
		4.1. Disabled for app version (12)
		4.2. Disabled for all end-users (2)
		5. Error handling (15)
		6.1. Software (8)
		6.2. Hardware (3)
		7. Environment (4)
		8. Usage patterns (2)
Restriction	138 (74.6%)	
Mandatory	91 (49.2%)	1. Server (29)
		2. Alternate entry (14)
		3.1. Equipment (10)
		3.2. Information (12)
		4.1. Disabled for app version (9)
		4.2. Disabled for all end-users (1)
		5. Error handling (15)
		6.1. Software (7)
		6.2. Hardware (5)
		7. Environment (5)
Discretionary	47 (25.4%)	1. Server (6)
		3.1. Equipment (3)
		3.2. Information (2)
		4.1. Disabled for app version (16)
		4.2. Disabled for all end-users (9)
		5. Error handling (5)
		6.1. Software (4)
		6.2. Hardware (5)
		7. Environment (3)
		8. Usage patterns (3)
4. Data	143 (77.3%)	
Type	143 (77.3%)	
Parameters	123 (66.5%)	1. Server (39)
		2. Alternate entry (35)
		3.1. Equipment (5)
		3.2. Information (15)
		4.1. Disabled for app version (12)
		4.2. Disabled for all end-users (2)
		5. Error handling (15)
		6.1. Software (8)
		6.2. Hardware (3)
		7. Environment (4)
		8. Usage patterns (2)
Execution Dependencies	52 (28.1%)	1. Server (10)
		2. Alternate entry (12)
		3.1. Equipment (11)
		3.2. Information (5)
		4.1. Disabled for app version (5)
		4.2. Disabled for all end-users (2)
		5. Error handling (11)
		6.1. Software (5)
		6.2. Hardware (3)
		7. Environment (2)
Format	143 (77.3%)	
Primitive	107 (57.8%)	1. Server (30)
		2. Alternate entry (29)
		3.1. Equipment (8)
		3.2. Information (14)
		4.1. Disabled for app version (13)
		4.2. Disabled for all end-users (2)
		5. Error handling (14)
		6.1. Software (7)
		6.2. Hardware (2)
		7. Environment (5)
Strings	69 (37.3%)	1. Server (23)
		2. Alternate entry (27)
		3.1. Equipment (2)
		3.2. Information (6)
		4.1. Disabled for app version (6)
		4.2. Disabled for all end-users (2)
		5. Error handling (5)
		6.1. Software (6)
		6.2. Hardware (1)
		7. Environment (4)
Objects	86 (46.5%)	1. Server (28)
		2. Alternate entry (14)
		3.1. Equipment (11)
		3.2. Information (8)
		4.1. Disabled for app version (9)
		4.2. Disabled for all end-users (3)
		5. Error handling (15)
		6.1. Software (5)
		6.2. Hardware (4)
		7. Environment (1)
		8. Usage patterns (2)