

## Maintainability

### Single Keywords

"doc\*": 49,  
"javadoc": 15,  
"cleanup": 15,  
"polish\*": 12,  
"typo": 8,  
"simpli\*": 7,  
"read\*": 6,  
"improve\*": 5,  
"fix": 5,  
"duplicat\*": 5,  
"refact\*": 4,  
"update": 4,  
"customi\*": 3,  
"nam\*": 2,  
"dependenc\*": 2,  
"deprecated": 2,  
"build": 2,  
"maintain\*": 2,  
"clean\*": 2,  
"replace\*": 2,  
"readme": 2,  
"unnecessary": 1,  
"syntax": 1,  
"misleading": 1,  
"clarify": 1,  
"comprehensible": 1,  
"outdated": 1,  
"renaming": 1,  
"migrate": 1,  
"maintainability": 1,  
"guidelines": 1

### Composed Sentences Keywords

"documentation + improvement": 1,  
"fix + documentation": 1,  
"improve + docs": 1,  
"clarify + docs + for + usage": 1,  
"improve + extension": 1,  
"duplicating + logic": 2,  
"not + required": 2,  
"configuration + properties": 1,  
"duplicated code": 1,  
"remove + incorrect": 1,  
"facilitate + creation": 1,

"long method": 1,  
"less code": 1,  
"unused + dependency": 1,  
"easier + understand": 1,  
"correction + doc": 1,  
"naming + convention": 1,  
"to + make + the + code + more": 1,  
"difficult + to + read": 1,  
"easy + integration": 1,  
"single + responsibility": 1,  
"outdated + javadoc": 1,  
"whitespace format": 1,  
"code + style": 1

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## Security

### Single Keywords

"auth\*": 39,  
"oauth\*": 17,  
"security": 15,  
"JWT": 11,  
"token": 9,  
"saml\*": 8,  
"password": 5,  
"vulnera\*": 4,  
"exception": 4,  
"session": 4,  
"ssl": 3,  
"exposed": 3,  
"sha\*": 3,  
"jwks": 3,  
"bearer": 3,  
"attack\*": 3,  
"crypto\*": 3,  
"sanitize": 2,  
"denied": 2,  
"leaking": 2,  
"null": 2,  
"login": 2,  
"CSRF": 2,  
"protected": 1,  
"cookie": 1,  
"ldap": 1,  
"breach": 1,  
"anonymous": 1,  
"decrypt": 1,

"access": 1,  
"secure": 1,  
"key": 1,  
"secret": 1,  
"threat": 1,  
"victim": 1,  
"thread": 1,  
"safe": 1,  
"decrypter": 1

### **Composed Sentences Keywords**

"prefer + the + https + protocol": 1,  
"memory + leak": 1  
"public + key": 1,  
"grant + access": 1  
"token + Authentication": 1  
"access + tokens": 1,  
"exposed + as + a + bean": 1,  
"timing + attacks": 1,  
"token + hashing": 1

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## **Robustness**

### **Single Keywords**

"exception\*": 30,  
"\*throw\*": 19,  
"error\*": 16,  
"\*Exception": 10,  
"fail\*": 8,  
"null": 6,  
"\*handl\*": 5,  
"catch\*": 4,  
"NPE": 4,  
"stacktrace": 1,  
"logging": 1,  
"caught": 1,  
"robustness": 1,  
"crash": 1,  
"Ensure": 1,

### **Composed Sentences Keywords**

"null + check\*": 2,  
"error + handl\*": 2,  
"should + fail": 1,  
"shuts + down": 1,

"error + code": 1,  
"message + exception": 1,  
"throw + exception": 1,  
"chain + exception": 1,  
"propagate + root + cause": 1,  
"returning + validation + errors": 1,  
"null + pointer + exception": 1,  
"exception + handling": 1,  
"handling + exception": 1  
"does + not + handle": 1,  
"avoid \*Exception": 1

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## Performance

### Single Keywords

"performance": 14,  
"optimiz\*": 11,  
"\*sych\*": 4,  
"benchmark": 3,  
"memory": 2,  
"lock": 2,  
"parallel": 2,  
lazy\*: 2  
"cpu": 2,  
"inefficien\*": 2,  
"threadsafe": 1,  
"sockets": 1,  
"overhead": 1,  
"stream": 1,  
"loop": 1  
"timeout": 1,  
"fast": 1,  
"hotspots": 1,  
"expensive": 1,  
"caching": 1,  
"speed up": 1,  
"buffer": 1,  
"payload": 1,  
"byte": 1,  
"encoder": 1,  
"costly": 1,  
"cache": 1,  
"pipeline": 1,  
"session": 1,

"allocation": 1,  
"memorysaving": 1  
"slower": 1

### **Composed Sentences Keywords**

"multiple + beans": 1,  
"time + improvement": 1,  
"early + initialization": 1,  
"interface + cache": 1,  
"prevent + excessive + object + reallocations": 1,  
"lazily + initialize": 1,  
"multiple + invocations": 1,  
"called + just + once": 1,  
"memorysaving": 1  
"unnecessary + fetching": 1,  
"reduce + allocations": 1,  
"lazy + exceptions": 1,  
"storing + unnecessary": 1,  
"cpu + cycles": 1