# Checklist Table

*execute*

|  |  |
| --- | --- |
| **Method k** | *public void execute(AdminCommandContext context) {…}* |
| **Naming Conventions k** | * The name of the method actually represent the core functionality of the class. In fact, *execute(…)* contains code that is executed during the subcommand call. * One-character integer variables *j* and *i* are respectively declared in line 225 and 235. *j* scope is limited to the *for* block between lines 225 and 230 and it is used as a counter variable to scan an array. *i* is used as a throwaway variable (counter) in the *for* block 236-267; * The classes involved in the method are nouns in mixed case with the first letter capitalized. * The names of the involved methods follow the standard convention (verbs, with the first letter of each addition word capitalized). * The attributes are all in *CamelCase*. * There are not constants involved in this method. |
| **Indentions k** | * The indentation is always a four spaces indentation. No tab character is used. |
| **Braces k** | * The braces follow coherently the Kernighan and Ritchie style. * There are different blocks in the method (if, for, try/catch) with different levels of nesting. Every block have the suggested structure:   ***for/if***  *<condition> {*  *<< lines of code >>*  *}* |
| **Files Organization w** | * There are different cases in which blank lines are used to separate pieces of code.   + 134: Separates method declaration si dice così? from the initialization of *report*;   + 136: separates *part* initialization (135) from *report* initialization (137);   + 138: separates *part* initialization (137) from *applicationName* initialization (139);   + 143, 151, 156: respectively separate code blocks at lines 140-142, 144-150, 151-157;   + 156: separates *return* statement (155) from the closing bracket (157) of the code block 152-157;   + 158: separates closing bracket (157) and *application* initialization (159);   + 160: separates *application* initialization (159) from code block 161-166;   + 167: separates *appInfo* (168) from code block 161-167;   + 173:   + 175:   + 182:   + 185:   + 198:   + 199:   + 207:   + 211:   + 258:   + 268: * There doesn’t seem to be a proper “style” in the use of empty lines. * Length of lines 153, 163, 170, 178, 191, 202 exceeds 120. For readability purposes it would be better to replace some strings with some static final variables. For example at line 202 the first two string parameters passed to *getLocalString("listsubcomponents.invalidtype", "The type option has invalid value {0}. It should have a value of servlets or ejbs.", type)* can be replaced with   *getLocalString(INV\_TYPE\_PROP, INV\_TYPE\_DEFAULT\_STR, type).* In this way length is reduced from 189 to 107. DA AGGIUNGERE MIGLIORE FORMATTAZIONE PER RAPPRESENTARE MEGLIO CODICE E A CAPO   * Length of line 253 exceeds 120. In this case we think that would be better to reduce the level of nesting and cyclomatic complexity, maybe delegating some operations to a new method. |
| **Wrapping Lines k** | * Line breaks always occur after a comma or an operator. * No high level breaks are used, because they are not requested in this specific part of code. * The statements are always aligned with respect to the nesting level. |
| **Comments w** | * Line 199   // the type param can only have values "ejbs" and "servlets"  better explains why and how *type* value is checked in lines 200 and 201;   * Lines 242, 243   // we use the property mechanism to provide  // support for JSR88 client  WIP BOH!   * Line 269   // add the properties for GUI to display   * Line 274   // now this is the normal output for the list-sub-components command  simply states that if code execution has come to this point, then no problem was found and a normal output could be given to the originator of the action.   * There are not outdated comments for this method. * This method lacks a proper documentation and meaningful comments. In fact every comments seems to be only a reminder for the developer who wrote this class. In general this is not a good practice because code must be written to be as readable as possible by anyone, but in this case it’s not a big deal. |
| **Initialization and Declarations** | * The method is private because it is not used in other classes. * There is only one variable in the method (the list of submodules information). It is clearly nested in the right way. * The list is initialized to empty by default. * The variable moduleInfoList is clearly declared at the beginning of the block. |
| **Method Calls k** | * The parameters are presented in the correct order. * Every method called in the *execute* is the right one. There not exist wrong method calls. |
| **Arrays kw** | * At line 213 *longestValue* is declared as an array of two elements. At lines 216, 217, 220, 221 and 226 *longestValue* valid position are accessed. In fact on lines 216 and 217 *longestValue[0]* is accessed (that is, the position with index 0) and on lines 220 and 221 *longestValue[1]* is accessed. During the *for* block at lines 225-230 *j* assumes integer value of 0 and 1. So statement *longestValue[j]* doesn’t cause overflow/underflow. * DA AGGIUNGERE COLLECTIONS |
| **Object Comparison k** | * At lines 140, 169, 176, 190, 200, 241 and 244 *NULL* checks are performed. In those cases “*==”* comparison (that is, a comparison between references) is needed because it’s necessary to understand whether a variable is a reference to an object or not.   At line 201 *type* string value is checked. In this case *“equals.()”* comparison is needed because a “*==*” would always return *false* as the strings checked are stored in different memory areas. |
| **Output Format** | * The method is a getter. There is not a displayed output, but just a returned list of elements. * No error messages are necessary. |
| **Computation, Comparisons and Assignments kw** | * ~~The implementation of the method is elegant~~ MA ANCHE NO!. It avoids “brutish programming” OK. * The order of computation/evaluation, operator precedence and parenthesizing is correct. * There’s no need to add parenthesis to avoid operators precedence issues. * There are no divisions, so there are not denominators that can assume zero as value. * There are no divisions, so we cannot have problem with divisions between integer numbers. * Objects comparison are correctly done. Check *Object Comparison* section. * There are not implicit type conversions in the analyzed part of code. * No problem found in exception handling. See *Exceptions* section for more. |
| **Exceptions k** | * There’s only one try/catch block (144-150). *applicationName* should be composed by the application name and the version identifier, separated by a chosen character. So *checkIdentifier(applicationName)* method of *VersioningUtils* class is called to check if *applicationName* is syntactically correct. If not *VersioningSyntaxException* will be thrown. In this case the exception is catch by *catch* block at line 146, the output is populated with information about the exception, the exit code is properly set and the method is then terminated. |
| **Flow of Control k** | * There are not switch statements in the code. * Every loops in the method is then analyzed:   Lines 214-223  *subComponents.entrySet()* is a finite set. So the *iterator* will scan a limited number of elements *Map.Entry*.  Lines 225-230  No problem on this loop. In fact, as introduced in *Array* section, *j* can only assume value 0 and 1 (*j* initial value is 0 and is incremented by 1 unit every iteration) and then the loop will terminate (when condition *j<2* is not valid anymore).  Lines 236-267  Similar to the block 214-223, *subComponents.keySet()* is a finite set. |
| **Files k** | * No Files are directly involved in this method, even though there could be references to methods/classes that handle files (for example *LocalStringManagerImpl* class looks for *LocalString.properties*). |