**PSP2 Design Review Checklist**

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| Student | 阙俊杰；任兵兵 | Date | 2015/7/13 |
| Program | Assignment 5 | Program # |  |
| Instructor | 荣国平 | Language | Java |

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| Purpose | To guide you in conducting an effective design review |
| General | * Review the entire program for each checklist category; do not attempt to review for more than one category at a time! * As you complete each review step, check off that item in the box at the right. * Complete the checklist for one program or program unit before reviewing the next. |

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| --- | --- | --- | --- | --- | --- |
| Complete | Verify that the design covers all of the applicable requirements.   * All specified outputs are produced. * All needed inputs are furnished. | Y |  |  |  |
| External Limits | Where the design assumes or relies upon external limits, determine if behavior is correct at nominal values, at limits, and beyond limits. | Y |  |  |  |
| Logic | * Verify that program sequencing is proper.   lists are in the proper order.  Recursion unwinds properly.   * Verify that all loops are properly initiated, incremented, and terminated. * Examine each conditional statement and verify all cases. | N | Y |  |  |
| Internal Limits | Where the design assumes or relies upon internal limits, determine if behavior is correct at nominal values, at limits, and beyond limits. | Y |  |  |  |
| Special Cases | * Check all special cases. * Ensure proper operation with empty, full, minimum, maximum, negative, and zero values for all variables. * Protect against out-of-limits, overflow, and underflow conditions. * Ensure “impossible” conditions are absolutely impossible. * Handle all possible incorrect or error conditions. | Y |  |  |  |
| Functional Use | * Verify that all functions, procedures, or methods are fully understood and properly used. * Verify that all externally referenced abstractions are precisely defined. | Y |  |  |  |
| System Considerations | * Verify that the program does not cause system limits to be exceeded. * Verify that all security-sensitive data are from trusted sources. * Verify that all safety conditions conform to the safety specifications. | Y |  |  |  |
| Names | Verify that   * all special names are clear, defined, and authenticated * the scopes of all variables and parameters are self-evident or defined * all named items are used within their declared scopes | Y |  |  |  |
| Standards | Ensure that the design conforms to all applicable design standards. | Y |  |  |  |
| Reuse | Design more items could be reused for future, in case of too much duplicate coding  Verify which parts can be reused | Y |  |  |  |
| Parameter Type | Consider the types of parameters, a good encapsulation need the method parameters are easy to use and consensus | Y |  |  |  |