Functional Specification Instructions and TEmplate

Personal Software Process for Engineers

# C69: Functional Specification Template Instructions

|  |  |
| --- | --- |
| Purpose | * To hold an object’s functional specifications * You can use this template to describe functions and procedures when you do not use object-oriented methods. If you do, replace the word *object* with either of the words *function* or *procedure*, as appropriate. |
| Header | Enter the following:   * Your name and today’s date * The program name and number * The instructor’s name * The language you will use to write the program |
| General | If several objects belong to the same class, group these related specification templates together. |
| Object/class name | * Enter the object name and the classes from which it inherits. * List the class names starting with the most immediate. * Where practical, list the full inheritance hierarchy. |
| Attributes | Enter any parameters whose values are externally visible and effect object behavior. |
| Method declaration | * List the declaration for each object method. * Include all the required variables and parameters. * Include the required type designations. * Use the same format used to declare the function in the program. |
| Method external specification | * Describe the operation performed by each method. * Where possible, use a formal or a mathematical notation. * Include all returns and exception conditions. |

# Table C68: Functional Specification Template

|  |  |  |  |
| --- | --- | --- | --- |
| Student |  | Date |  |
| Program |  | Program # |  |
| Instructor |  | Language |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Object/Class Name | | Parent Classes | Attributes |
|  | Method declaration | Method external specification | |
|  |  |  | |
|  |  |  | |
|  |  |  | |
|  |  |  | |
|  |  |  | |
|  |  |  | |
|  |  |  | |

Document Markings

Copyright 2020 Carnegie Mellon University. All rights reserved.  
  
This material is based upon work funded and supported by the Department of Defense under Contract No. FA8721-05-C-0003 with Carnegie Mellon University for the operation of the Software Engineering Institute, a federally funded research and development center.  
  
Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the United States Department of Defense.  
  
NO WARRANTY. THIS MATERIAL IS FURNISHED ON AN “AS-IS” BASIS WITH NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTY OF FITNESS FOR PURPOSE OR MERCHANTABILITY, ANY WARRANTY WITH RESPECT TO FREEDOM FROM PATENT, TRADEMARK, OR COPYRIGHT INFRINGEMENT, OR THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.  
  
[Distribution Statement A] This material has been approved for public release and unlimited distribution. The United States Government has Unlimited Rights in this material as defined by DFARS 252.227-7013.

The text and illustrations in this material are licensed by Carnegie Mellon University under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

The Creative Commons license does not extend to logos, trade marks, or service marks of Carnegie Mellon University.