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|  | **Department of Computer Science**  **University of Management and Technology** |

**Assignment Description File**

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| Course Name: | **Software Engineering** |
| Section: | **V2** |
| Teacher: | **Fasiha Ashraf** |
| Student Name n ID |  |
| Assignment No.: | 4 |
| Project Title |  |

**NOTE: PLAGIARISED ASSIGNMENT EITHER FROM CLASSMATES OR INTERNET WILL BE MARKED STRAIGHT ZERO.NO ASSIGNMENT WILL BE ACCEPTED AFTER DEADLINE.ALWAYS MENTION SECTION ON ASSIGNMENT**

**FOLLOW THE TEMPLATE ATTACHED**

**Assignment Description:**

**Q1:** Write all functional requirements of your project.

**Q2:** Write all the non-functional requirements of your project.

**Submission Guidelines:**

Submit hard copy in class/ Softcopy on LMS.

Prefer to present in Table format

**SEE THE TEMPLATE ATTACHED**

# System Functions/ Functional Requirements

This section is can be skipped, if Requirement Specifications document has been developed for the project. Otherwise this section is mandatory.

This section may contain

* end user, operator, support, or integration functions,
* performance requirements,
* design constraints,
* programming language, and
* interface requirements.

System functions are descriptions of what a system is supposed to do. They should be identified and listed in logical cohesive groups, with their category (priority) assigned. These system functions will be identified as a result of the requirement gathering process conducted with the client. However, in some cases, prior to the development of the Functional Specifications the requirements may already have been listed in a document: if this is so then a reference to the document may suffice.

To verify that some **X** is indeed a system function; it should make sense in the following sentence:

The system should do <**X**>

The table below gives an example of how system functions can be listed:

* The Functions column gives a brief one-line description of the required functionality.
* The Category column refers to the status of the functionality for the proposed system. The options for the Category are defined below.
* The Attribute column defines the system characteristics. The Details and Constraints column specifies the conditions within which the attribute is applicable. Section 1.12 defines the default Attributes and the related Constraints. In case, the default conditions are to be over-ridden then the conditions can be defined in this table.

Function Categories

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| --- | --- |
| **Function Category** | **Meaning** |
| Evident | Should perform, and user should be cognizant that it is performed. |
| Hidden | Should perform, but not be visible to users. This is true of many underlying technical services, such as save information in a persistent storage mechanism. Hidden functions are often missed during the requirements gathering process. |
| Frill | Optional; adding it does not significantly affect cost or other functions. |

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| *Ref #* | *Functions* | *Category* | *Attribute* | *Details & Boundary Constraints* |
| *R1.1* | *Record the underway sale – the items purchased* | *Evident* | *System Response time* | *Price listing within 3 seconds*  *Availability agreement in less than 10 sec* |
| *R1.2* | *Reduce inventory quantities when a sale is committed* | *Hidden* | *Concurrent user load* |  |
| … | … | … |  |  |

System Attributes/ Nonfunctional Requirements

System attributes are nonfunctional system qualities – such as ease of use. System attributes are characteristics of the system; they are not functions.

System attributes have a possible set of Attribute Details, which tend to be discrete, fuzzy, symbolic values of the attribute, such as:

response time = psychologically appropriate

interface metaphor = graphical, browser-based

Some system attributes may also have Attribute Boundary Constraints, which are mandatory boundary conditions, usually on a numeric range of values of an attribute, such as:

response time = five seconds maximum

In this section the Category column indicates whether or not the attribute is critical for the operation of the system.

The Category can take two options:

* Optional
* Mandatory

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| Attribute | Details and Boundary Constraints | Category |
| *Response time* | *(Boundary constraint) When recording a sold item, the description and price will appear within 5 seconds* | *Optional* |
| *Concurrent User Load* | *A minimum of 10 users connected simultaneously* | *Mandatory* |

## Non-Functional Requirements