

Test Project Estimation Tool Manual v1.0

| <i>Factors</i>                       | <i>Rating</i> | <i>Cases</i>                                                                                                                                                                                                                            |
|--------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| User Importance (Ue)                 | 3             | Low: The importance of the function relative to the other functions is low                                                                                                                                                              |
|                                      | 6             | Normal: The importance of the function relative to the other functions is normal                                                                                                                                                        |
|                                      | 12            | High: The importance of the function relative to the other functions is high                                                                                                                                                            |
| Usage Intensity (Uy)                 | 2             | Low: The function is only used a few times per day or per week                                                                                                                                                                          |
|                                      | 4             | Normal: The function is being used a great many times per day                                                                                                                                                                           |
|                                      | 12            | High: The function is used continuously throughout the day                                                                                                                                                                              |
| Interfacing (I)                      | 2             | Low: The degree of interfacing associated with the function is low                                                                                                                                                                      |
|                                      | 4             | Normal: The degree of interfacing associated with the function is normal                                                                                                                                                                |
|                                      | 8             | High: The degree of interfacing associated with the function is high                                                                                                                                                                    |
| Complexity (C)                       | 3             | Low: The function contains no more than five conditions                                                                                                                                                                                 |
|                                      | 6             | Normal: The function contains between six and eleven conditions                                                                                                                                                                         |
|                                      | 12            | High: The function contains more than eleven conditions                                                                                                                                                                                 |
| Dynamic Quality Characteristics (Qd) | 3             | Suitability: Quality requirements are not important and are therefore disregarded for test purposes.                                                                                                                                    |
|                                      | 4             | Security: Quality requirements are relatively unimportant but do need to be taken into consideration for test purposes.                                                                                                                 |
|                                      | 5             | Usability: Quality requirements are of normal importance. (Appropriate where the information system relates to a support process.)                                                                                                      |
|                                      | 6             | Efficiency: Quality requirements are very important. (Appropriate where the information system relates to a primary process.)                                                                                                           |
| Uniformity (U)                       | 1             | In the case of a second occurrence of a virtually unique function: in such cases, the test specifications can be largely reused                                                                                                         |
|                                      | 2             | In the case of a clone function: the test specifications can be reused for cloned functions                                                                                                                                             |
|                                      | 3             | In the case of a dummy function (provided that reusable test specifications have already been drawn up for the dummy).                                                                                                                  |
| FP assigned to the Function (FPf)    | 1             | Low: The degree of unadjusted actor weight associated with the function is low                                                                                                                                                          |
|                                      | 3             | Normal: The degree of unadjusted actor weight associated with the function is normal                                                                                                                                                    |
|                                      | 5             | High: The degree of unadjusted actor weight associated with the function is high                                                                                                                                                        |
| (FP)                                 | 500           | Total number of function points assigned to the system as a whole (minimum value 500)                                                                                                                                                   |
| Static Test Points (Qi)              | 16            | If a quality characteristic is tested by means of a checklist (static test), the factor Qi get the value 16. For each subsequent quality characteristic to be included in the static test, another 16 is added to the Qi factor rating. |
| Test Tools                           | 1             | Testing involves the use of a query language such as SQL; a record and playback tool is also being used.                                                                                                                                |
|                                      | 2             | Testing involves the use of a query language such as SQL, but no record and playback tool is being used.                                                                                                                                |
|                                      | 4             | No test tools are available.                                                                                                                                                                                                            |
| Development Testing                  | 2             | A development testing plan is available and the test team is familiar with the actual test cases and test results.                                                                                                                      |
|                                      | 4             | A development testing plan is available.                                                                                                                                                                                                |
|                                      | 8             | No development testing plan is available.                                                                                                                                                                                               |

|                                |     |                                                                                                                                                     |
|--------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Basis</b>              | 3   | During the system development documentation standards are being used and a template, in addition the inspections are organized                      |
|                                | 6   | During the system development documentation standards are being used and a template.                                                                |
|                                | 12  | The system documentation was not developed using a specific standards and a template.                                                               |
| <b>Development Environment</b> | 2   | The system was developed using a 4 GL (Generation Language) programming language with an integrated DBMS containing numerous constraints.           |
|                                | 4   | The system was developed using a 4 GL programming language, possibly in combination with a 3 GL language.                                           |
|                                | 8   | The system was developed using only a 3 GL programming language such as COBOL, PASCAL or RPG.                                                       |
| <b>Test Environment</b>        | 1   | Environment has been used for testing several times in past.                                                                                        |
|                                | 2   | The test is to be conducted in a newly equipped environment similar to other well-used environments within organization.                            |
|                                | 4   | The test is to be conducted in a newly equipped environment which may be considered experimental within organization.                               |
| <b>Testware</b>                | 1   | A usable general initial data set (tables, etc.) and specified test cases are available for the test.                                               |
|                                | 2   | A usable general initial data set (tables, etc.) is available for the test.                                                                         |
|                                | 4   | No usable testware is available.                                                                                                                    |
| <b>Team Size</b>               | 3   | The team consists of no more than four people.                                                                                                      |
|                                | 6   | The team consists of between five and ten people.                                                                                                   |
|                                | 12  | The team consists of more than ten people.                                                                                                          |
| <b>Management Tools</b>        | 2   | Both an automated time registration system and an automated defect tracking system (including CM: Configuration Management) are available.          |
|                                | 4   | Either an automated time registration system or an automated defect tracking system (including CM) is available.                                    |
|                                | 8   | No automated (management) systems are available.                                                                                                    |
| <b>Productivity Factor (P)</b> | 0.7 | The productivity factor is a measure of the experience, knowledge and skill of the test team. The value is between 0.7 to 2.0.                      |
| <b>Person Hour Cost</b>        | -   | Average per Our Salary of the Employee                                                                                                              |
| <b>Overhead Cost</b>           | 50% | % of the Salary Cost (it can vary from organizations to organizations)                                                                              |
| <b>Calculate</b>               | -   | One can only calculate the estimation of the project.                                                                                               |
| <b>Submit Data</b>             | -   | Once Submit Data with E-mail ID will generate project ID and shared in the E-mail. Later data can be retrieved and modify for any changes required. |
| <b>Existing Project</b>        | -   | Submitted project will receive E-mail with Project ID. Using Project ID one can retrieved and modify for any changes required.                      |

**Feedback E-mail:** jshaiful@gmail.com

**IEEE DOI:**

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7058650>

<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6962440>