Requirement Size and Function size measurement

Software Metrics

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Project Name	**Farming Assistant**
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Requirement Size

Requirements and specification documents generally combine text, graphs, and special mathematical diagrams and symbols. The nature of the presentation depends on the particular style, method, or notation used. When measuring code or design size, you can identify atomic entities to count (lines, statements, bytes, classes, and methods, for example). However, a requirements or specification document can consist of a mixture of text and diagrams. For example, a use case analysis may consist of a UML use case diagram along with a set of use case scenarios that may be expressed as either text or as UML activity diagrams. Because a requirements analysis often consists of a mix of document types, it is difficult to generate a single size measure.

Number of Use Case

Definition	**Counting the total number of use case**
Type	Manual
Value	28

Number of Actor

Definition	**Counting the total number of actor**
Type	Manual
Value	4

Number of Stakeholder type

Definition	**Counting the total number of stakeholders**
Type	Manual
Value	4

Number of Functional Requirement

Definition	**Counting the total number of functional requirements**
Type	Manual
Value	10

Number of Activity Diagram

Definition	**Counting number of activity diagram drawn in the SRS**
Type	Manual
Value	30

Number of Pages

Definition	Counting number of total pages of the SRS
Type	Manual
Value	74

Number of Figures

Definition	Counting number of total figures in the SRS
Type	Manual
Value	31

Number of Tables

Definition	Counting number of total tables in the SRS
Type	Manual
Value	28

Function Size

There have been several serious attempts to measure functionality of software products. Here we are using function point measure to measure the function size of our project.

Table for Calculating Function Point:

Item Type	Name	Complexity	Complexity weight
External Inputs (Total=10)	User Information	Complex	8
	Product Information	Average	5
	Category Information	Average	5
	Blog Information	Simple	4
	Product Search Input	Simple	4
	Farmers' Problems description	Average	5
	Farmers' Problem Solution	Simple	4
	Order Information	Complex	7
	Payment method	Average	5
	Delivery status	Simple	4
External Outputs (Total=14)	User list	Simple	4
	Product List	Simple	4
	Category List	Simple	4
	Blog list	Simple	4
	Specific Blog	Average	6
	Specific Product details	Complex	6
	Order table	Average	5
	Sign Up successful message	Complex	8
	Login Successful message	Complex	7
	Farmer's problems list	Average	5
	Given Solutions	Simple	4
	Weather Information	Complex	8
	Market price Information	Complex	7
	Govt Notices	Complex	7
External Enquiries (Total=10)	Check user details	Average	5
	View Product List	Average	5
	View Category list	Average	5
	View Specific Blog	Average	5
	View Specific Product	Simple	4
	Confirm order	Complex	6
	View Farmers' problems' solution	Simple	4
	View Order List	Average	5
	View Blog list	Simple	4
	See weather Forecast	Average	5
	See market price	Simple	4

	Download Government notice	Complex	6
External files (Total=3)	Product images	Simple	4
	Category Images	Simple	4
	Blog images	Simple	4
Internal files (Total=0)	None		0
Unadjusted Function Point (UFP)			**= 187**

Complexity Factors

No.	Complexity Factors	Rating (0-5)
F1	Reliable backup and recovery	5
F2	Data communications	3
F3	Distributed functions	0
F4	Performance	4
F5	Heavily used configuration	1
F6	Online data entry	0
F7	Operational ease	5
F8	Online update	3
F9	Complex interface	1
F10	Complex processing	4
F11	Reusability	4
F12	Installation ease	5
F13	Multiple sites	1
F14	Facilitate change	2
	Total	**38**

Technical Complexity Factor (TCF) = *0.65 + 0.01 * 38 = 1.03*

Function Point (FP) = Unadjusted Function Point (UFC) * Technical Complexity Factor (TCF) = *187 * 1.03 = 192.61*