Course name: Software Metrics Lab
Course code: SE 3204

Submitted to   **Submitted by**

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Project name: IIT Resource Management

Team members:

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SRS link: IIT Resource Management

Source code: Code link

Requirement Size

Metric type	Name of the metrics	Measurement	
Stakeholders	Total number of the type of stakeholders	**Type**	**Amount**
		Office Assistant	5
		Lab Assistant	
		Director	
		Faculty members	
		Students	

Metric type	Name of the metrics	Measurement
Functional & Non-functional requirements	Number of total functional requirements	6
	Number of total non-functional requirements	7

Metric type	Name of the metrics	Measurement
Collection of requirements	Number of persons who interacted with	9
	Number of interviews conducted	7
	Number of questionnaire sessions	3

Metric type	Name of the metrics	Measurement
Use case Diagram	Number of use cases	21
	Number of actors	5
	Number of use cases per actor	4.2
	Number of relations use cases with actors in use case diagram	31
	Number of the relation of use cases per actor	6.2

	Number of relations among use cases	9
	Average number of relations among use cases (per use case)	0.43

Metric type	Properties	Measurement
Use case description	**Title**	**Number of actors related to use case description**
	Login	5
	Add File	1
	Delete File	1
	Search File Information	1
	Give Item Request Response	1
	Add Resource Item Type	1
	Delete Resource Item Type	1
	Give Requisition Response	1
	Check Resources	1
	Add Resource Item	1
	Delete Resource Item	1
	Place Complaint	1
	Submit Requisition Request	1
	Check Submitted Requisition Status	1
	Give Feedback	1
	Request Item	1
	Check Request Status	1
	Change PC Status	1
	Add Lab Resources	1
	Delete Lab Resources	1
	Give Lab Complaint Response	1

Metric type	Name of the metrics	Measurement
Use case description	Number of use case descriptions	21
	Number of total actors related to use case description	25
	Number of related actors per use case description	1.19

Metric Type	Properties	Metric	
Activity diagram	Title	Number of steps	Number of branching actions
	Login	3	2
	Add File	3	2
	Delete File	3	4
	Search File Information	4	4
	Give Item Request Response	3	2
	Add Resource Item Type	5	4
	Delete Resource Item Type	5	3
	Give Requisition Response	3	2
	Check Resources	2	0
	Add Resource Item	5	2
	Delete Resource Item	3	2
	Place Complaint	3	2
	Submit Requisition Request	2	0
	Check Submitted Requisition Status	3	0
	Give Feedback	4	2
	Request Item	2	0
	Check Request Status	3	2
	Change PC Status	3	2
	Add Lab Resources	4	2
	Delete Lab Resources	3	2
	Give Lab Complaint Response	2	2

Metric Type	Metric	Measurement
Activity diagram	Total number of activity diagrams	21
	Total number of Steps	68
	Total number of branching actions	42
	Average Steps per activity diagram	3.24
	Average branching actions per activity diagram	2

Function size

Function point complexity weights

Item	Simple	Average	Complex
External inputs	3	5	7
External outputs	4	6	8
External inquiries	3	5	7
External files	3	5	7
Internal files	3	5	7

Item	Name	Quantity	Complexity	Weight
External inputs	Office assistant Information	10	Average	5
	Lab assistant Information		Average	5
	Director Information		Complex	7
	Student Information		Complex	7
	Resource Information		Complex	7
	Teacher Information		Complex	7
	Requisition Request		Complex	7
	Stationery item request		Complex	7
	Place lab Pc complaint		Complex	7
	File information		Complex	7
External outputs	Resource availability	6	Average	6
	Lab Pc Status		Average	6
	Lab PC Allocation list		Complex	8
	Requisition status		Complex	8
	Stationery item request status		Average	6
	File information list		Average	6
External inquiries	Requisition placed Message	6	Average	5
	Stationary item request placed message		Simple	3
	Invalid stationary item message		Simple	3
	Lab pc complaint placed message		Average	5
	Invalid lab pc information message		Average	5
	Resource updated message		Complex	7
External files		0		0
Internal files	Database	1	Complex	7
Unadjusted function point				**141**

Components of the Technical Complexity Factor

No.	Complexity Factors	Rating (0-5)
F1	Reliable backup and recovery	4
F2	Data communications	3
F3	Distributed functions	0
F4	Performance	5
F5	Heavily used configuration	3
F6	Online data entry	4
F7	Operational ease	5
F8	Online update	4
F9	Complex interface	4
F10	Complex processing	5
F11	Reusability	5
F12	Installation ease	5
F13	Multiple sites	3
F14	Facilitate change	4
	Total	**56**

Technical Complexity Factor (TCF) $= 0.65 + 0.01 * 56 = $ **1.21**

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

$$= 141 * 1.21 = \textbf{170.61}$$