

## Assignment On Requirement Size

**Course Code:** SE 3104

**Course Title:** Software Metrics Lab

**Submission Date:** 05.03.2023

### Submitted To:

Mr. Dipok Chandra Das

Assistant Professor, IIT

Noakhali Science and Technology University (NSTU)

### Submitted By:

Md. Al-Amin

Sourov Debnath

Sanjatul Hasan Siam

ASH1925008M

ASH1925022M

ASH1925023M



**Noakhali Science and Technology University**

## Contents

Determining Requirement Analysis and Specification Size for SPL-II .....	2
Number of Use cases .....	2
Number of Actors .....	2
Number of Actors Per Class .....	2
Number of Activity Diagrams.....	3
Number of Functional Requirement .....	3
Number of Non-Functional Requirement .....	3
Number of Sequence Diagram.....	4
Functional Point Calculation .....	5

## List Of Figures:

Figure 1: Number of Actors Per Class .....	4
--	---

## Determining Requirement Analysis and Specification Size for SPL-II Project

### Number of Use cases

Definition	A use case is a list of actions or event steps typically defining the interactions between actor/s and a system to achieve a goal.
Measurement Procedure	Manually
Value	18

### Number of Actors

Definition	An actor represents a role of a user that interacts with the system that you are modeling. The user can be a human user, an organization, a machine, or another external system.
Measurement Procedure	Manually
Value	6

### Number of Actors Per Class

Definition	Represents average number of actors per class
Measurement Procedure	Manually
Value	$44/14=3.14\sim 3$

### Number of Activity Diagrams

Definition	Activity diagrams describe parallel and conditional activities, use cases and system functions at a detailed level
Measurement Procedure	Manually
Value	18

### Number of Functional Requirement

Definition	A Functional Requirement (FR) is a description of the service that the software must offer. It describes a software system or its component
Measurement Procedure	Manually
Value	11

### Number of Non-Functional Requirement

Definition	A Functional Requirement (FR) is a description of the service that the software must offer. It describes a software system or its component
Measurement Procedure	Manually
Value	8

### Number of Sequence Diagram

Definition	A sequence diagram is a Unified Modeling Language (UML) diagram that illustrates the sequence of messages between objects in an interaction
Measurement Procedure	Manually
Value	1

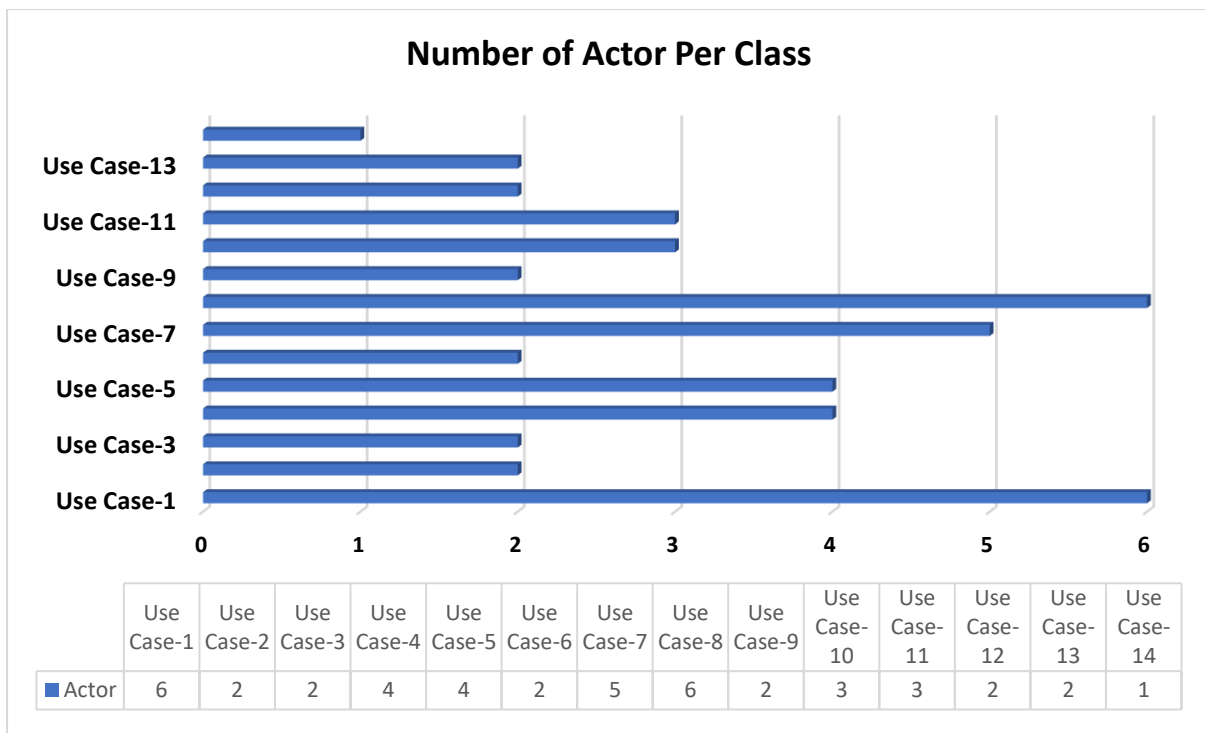


Figure 1: Number of Actors Per Class

## Functional Point Calculation:

- External Inputs: Pdf, Image, Menu Selection
- External Outputs: Pdf generate, Details message, Warning message, Mailed info, Receive data message
- External inquires: Student verification, Valid Recipient, Result enquires, Request acceptance/rejection inquiry,
- External Files: Student Database File, Result Database File, Authority Database File,
- Internal Files: System Database

$$\text{UFC} = 3 \times (4+3+3) + 5 \times (7+3+3+3+3) + 4 \times (3+4+6+3) + 3 \times (7+10+7) + 1 \times (7)$$

$$= 268$$

$$\text{TCF} = 0.65 + 0.01(21+10)$$

$$= 0.96$$

$$\text{FP} = 268 \times .96 = 257.28$$