./

Learning Report – Applied System Development Life Cycle and Software Testing



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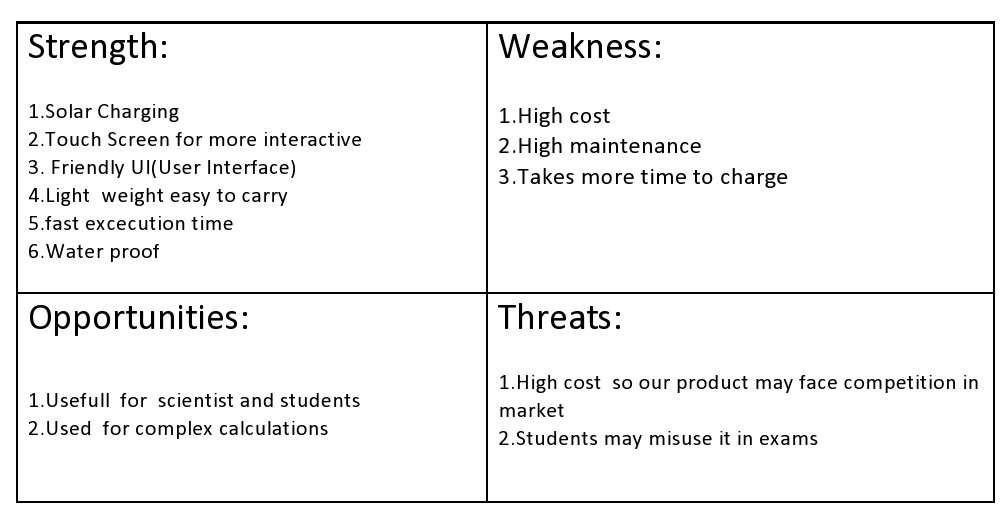
**ACTIVITY 1: SYSTEM/ SOFTWARE DEVELOPMENT**

INTRODUCTION:

Calculator is basically used to perform simple calculations but it can also be used to perform complex as well as scientific calculations. Calculators are portable, hence they can be taken to any location. They are also very handy to use.

**MY PRODUCT: “CALCULATOR”**

**SWOT ANALYSIS**

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**REQUIREMENTS**

## **High Level Requirements:**

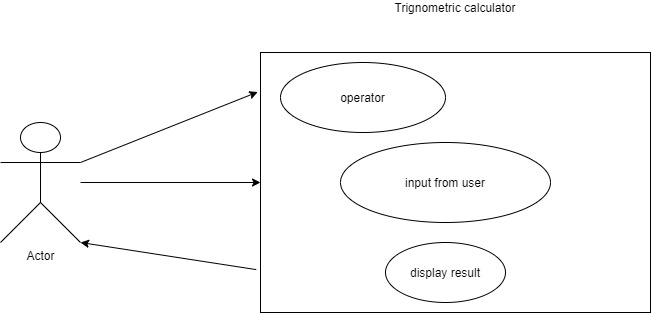
* **Arithmetic**
* **Area calculator**
* **Complex operation**
* **Trigonometric calculation**
* **Temperature conversion**
* **Volume calculation**
* **Discount calculation**
* **Interest calculation**
* **Length converter**
* **Square root function**
* **Matrix calculation**
* **Factorial calculation**
* **HCF**
* **LCM**

## Low level Requirements:

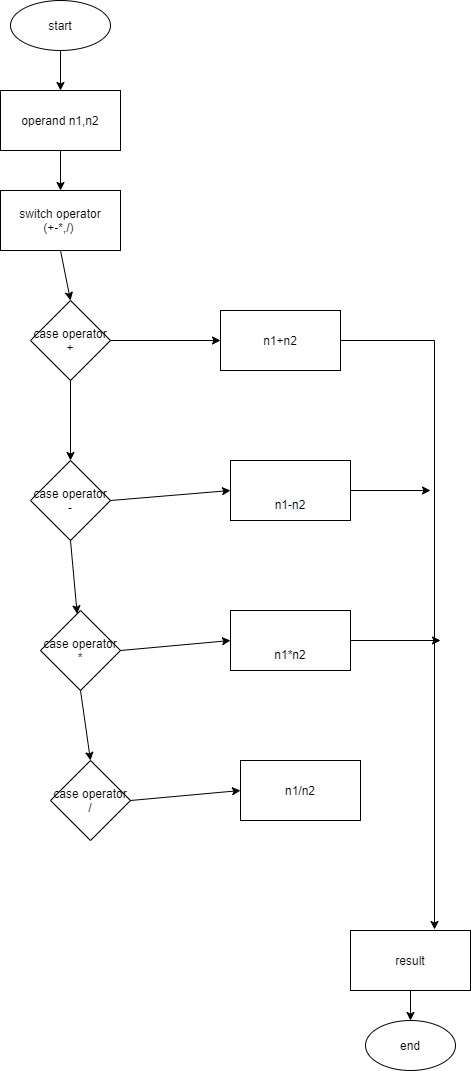
* **Addition, subtraction, multiplication, division modules.**
* **Length, breadth, height.**
* **Fahrenheit, Celsius temperature values.**
* **BODMAS.**
* **formulae for trigonometric calculations.**
* **Allow Digits 0-9.**
* **Dedicated on and off button.**

**DESIGN**

**HIGH LEVEL DESIGN:**

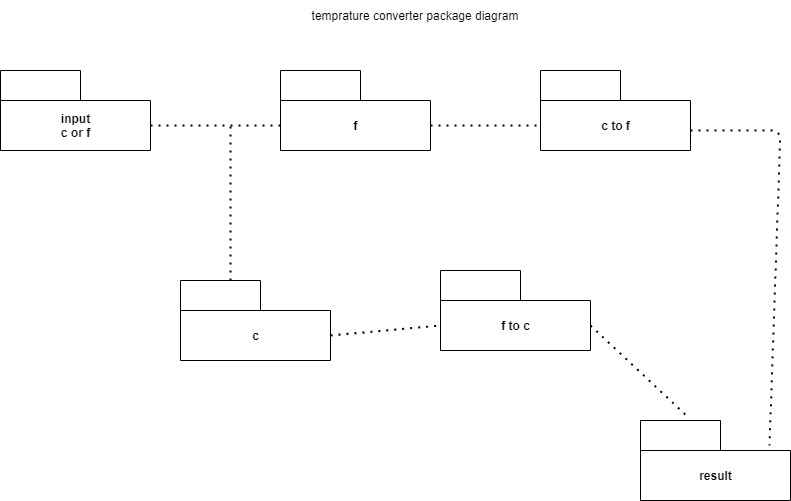
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**LOW LEVEL DESIGN**

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Activity diagram for arithmetic operations Low level

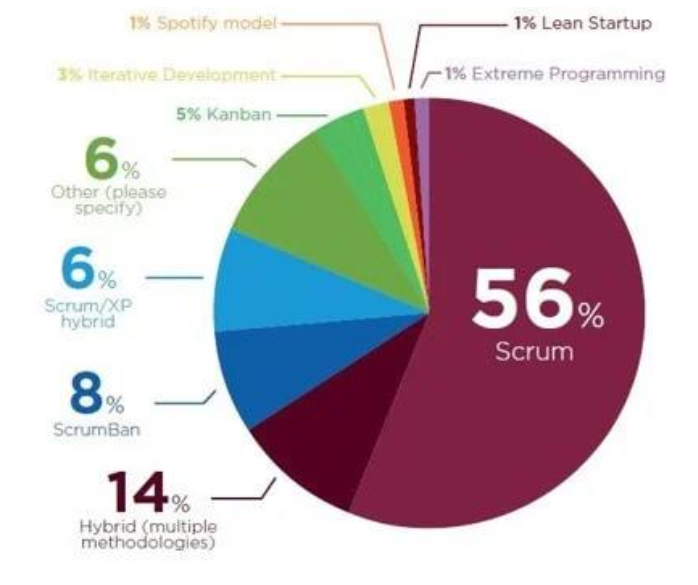
Low level diagram for temperature conversion



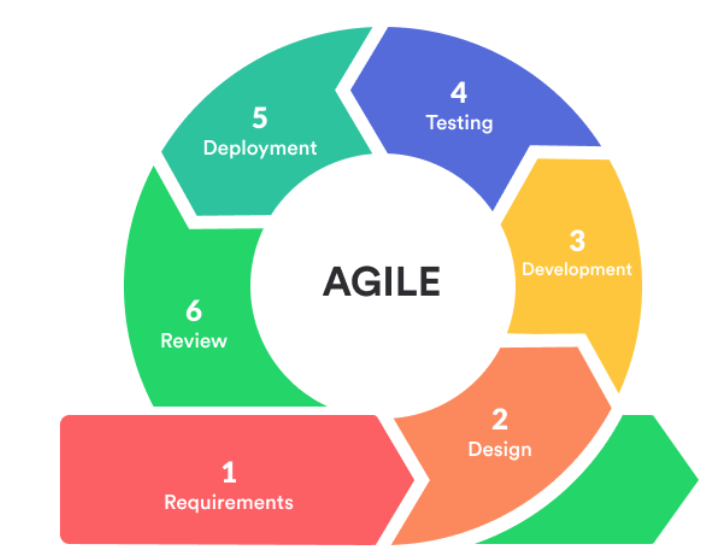
TEST PLANS

|  |  |  |  |
| --- | --- | --- | --- |
| Test ID | Description | Expected input | Expected output |
| 1. | 2nd operand is zero | 3/0 | Cannot divide by zero |
| 2. | Length of input exceeds the range | 9652658822 | Out of range error |
| 3. | Multiplying two 10 bit numbers | 9696562547\*9696854711 | Range out of bound |

ACTIVITY 2: AGILE METHODOLOGY

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Phases in agile model:

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Figure 1: USE CASE DIAGRAM (HIGH LEVEL)

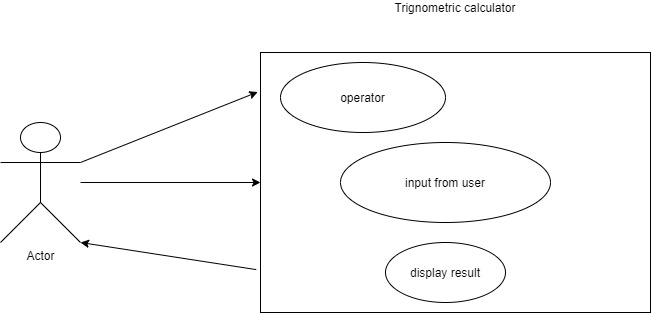


FIGURE 2: LOW LEVEL PACKAGE DIAGRAM

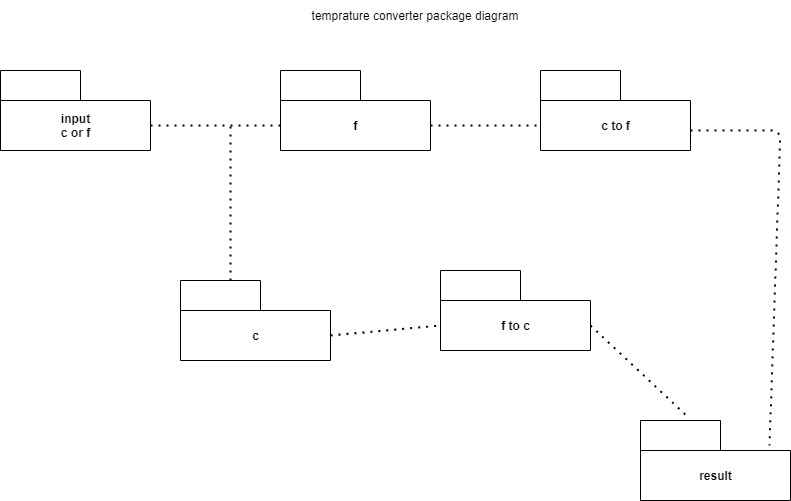


FIGURE3: ACTIVITY DIAGRAM FOR ARITHMETIC OPERATIONS:

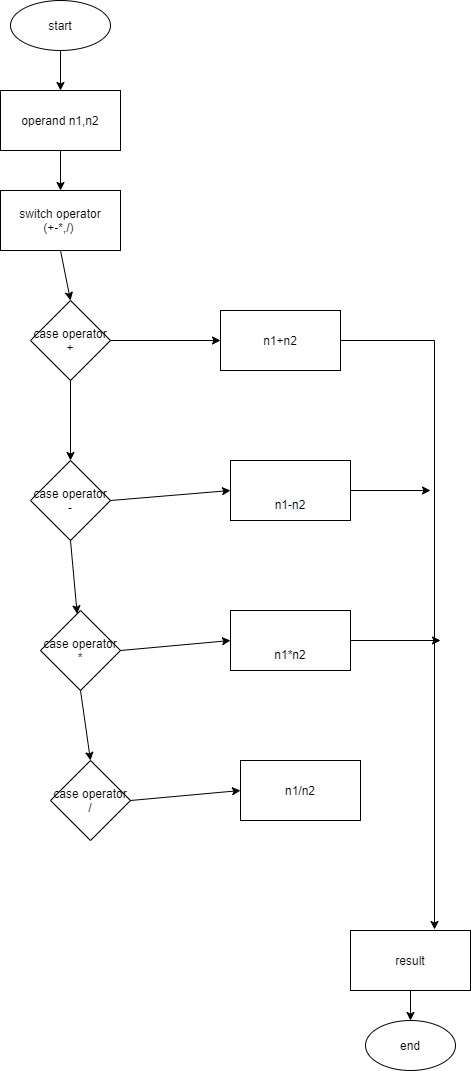
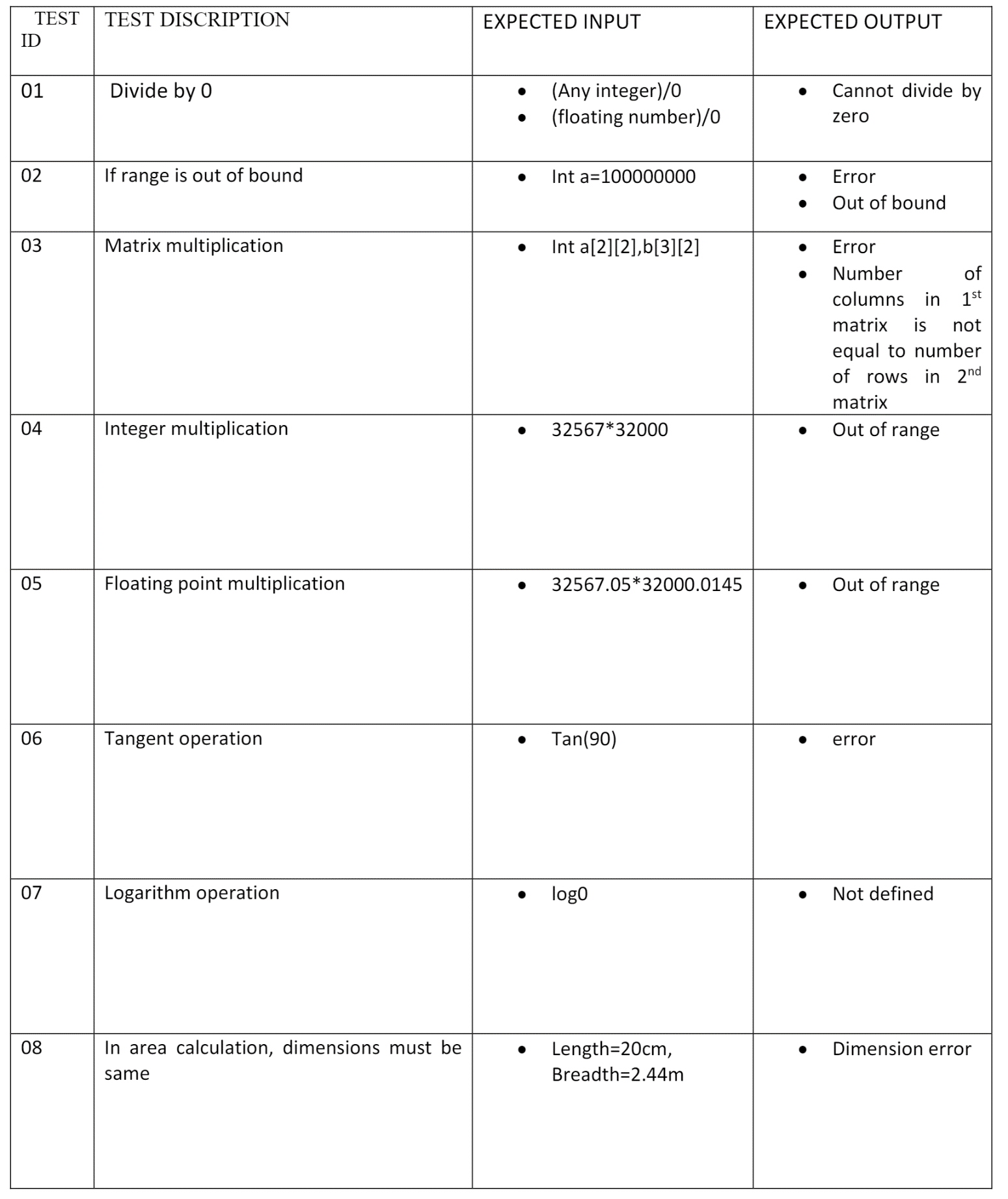
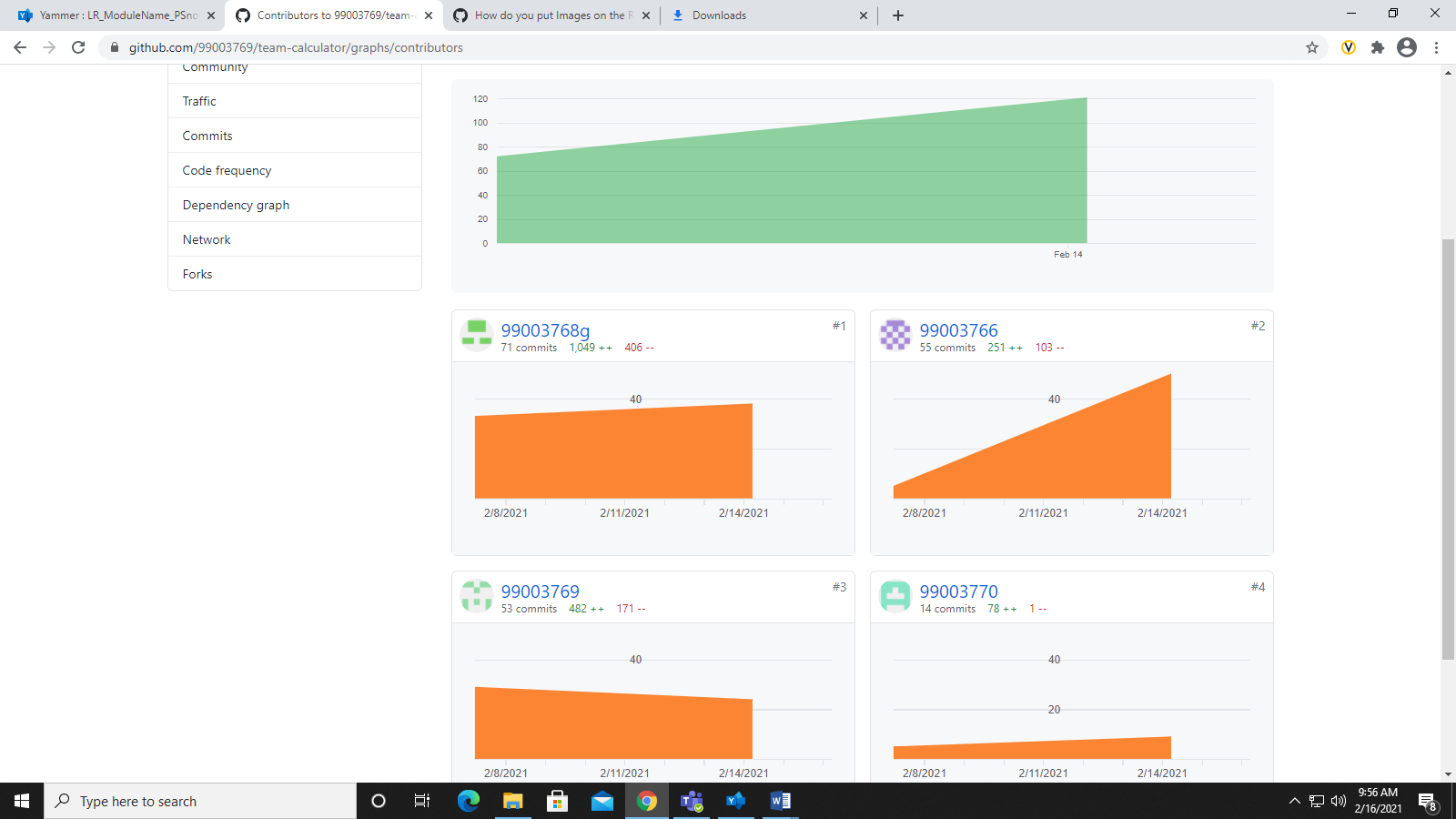


FIGURE 4: TEST PLAN

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GIT Commits:



Git issue:

