# **Experiment 9: Design test cases and generate test scripts in Selenium**

**Learning Objective:** Students will able to create unit test cases

**Tools:** Selenium record and playback

## **Theory:**

Software testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. Software testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation.

Write a program to calculate the square of a number in the range 1-100

```
#include <stdio.h>
int main() {
    int n, res;

    printf("Enter a number: ");
    scanf("%d", &n);

if (n >= 1 && n <= 100) {
    res = n * n;
    printf("\nSquare of %d is %d\n", n, res);
    } else if (n <= 0 || n > 100) {
        printf("Beyond the range");
    }

    return 0;
}
```

Sr no	Input	Output	
1	-2	Beyond the range	
2	0	Beyond the range	
3	1	Square of 1 is 1	
4	100	Square of 100 is 10000	
5	101	Beyond the range	
6	4	Square of 4 is 16	
7	62	Square of 62 is 3844	

#### **Test Cases**

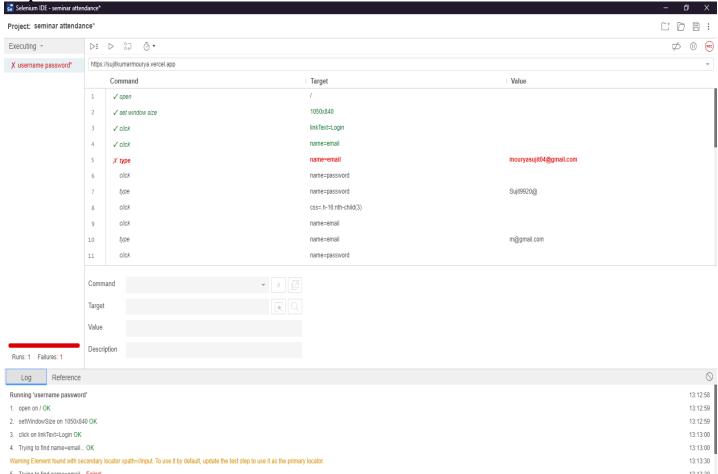
Test case 1: {I1,O1}
Test case 2: {I2,O2}
Test case 3: {I3,O3}
Test case 4: {I4,O4}
Test case 5: {I5,O5}
Test case 6: {I6,O6}
Test case 7: {I7,O7}

## **Black-box testing**

Knowing the specified function that a product has been designed to perform, test to see if that function is fully operational and error free. Includes tests that are conducted at the software interface. Not concerned with internal logical structure of the software It uncovers

- Incorrect or missing functions
- Interface errors
- Errors in data structures or external data base access
- Behavior or performance errors
- Initialization and termination errors

**Output:** 



**Learning Outcomes:** Students should have the ability to

<u>LO1</u>: Students will be able to understand Software Testing Concepts and the various Software standards.

**LO2**: to test a software with the help of Junit

**LO3**: create test cases

**LO4**: To understand different tools for testing

**Outcomes:** Upon completion of the course students will be able to write test cases for the project.

#### **Conclusion:**

## For Faculty Use

Correction Parameters	Formative Assessment [40%]	Timely completion of Practical [ 40%]	Attendance / Learning Attitude [20%]	
Marks Obtained				



# **TCET**

tcet

DEPARTMENT OF COMPUTER ENGINEERING (COMP)

[Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022]

Choice Based Credit Grading Scheme (CBCGS)

Under TCET Autonomy