TASK 2:

Aim: To design test cases for following problem using path testing.

Problem:

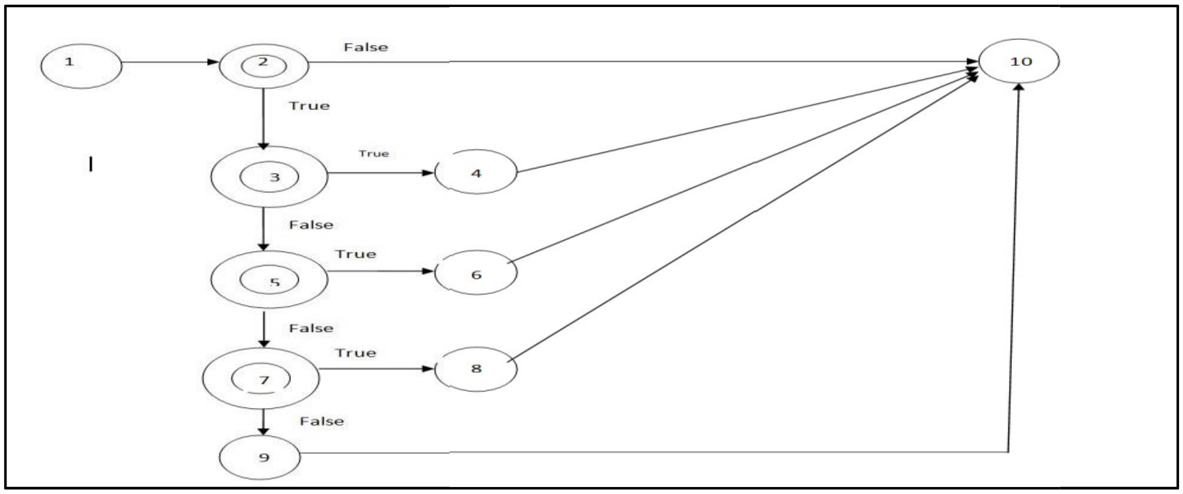
A mobile service provider calculate the bill payment of a customer as Follows

- If the number of calls are 120 then minimum payment is 300
- Plus Rs.1 for each call for the next 70 calls
- Plus Rs.0.82 for each call for the next 50 calls
- Plus Rs.0.45 for each call for more than 240 calls

Program:

```
#include <stdio.h>
int main()
{
    int calls;
    float pay=0;
    printf("Enter number of calls");
    scanf("%d",&calls);
    if(calls>0)
    {
    if(calls<120)
        pay=300;
    else if(calls>120 && calls<=190)
        pay=300+(calls-120)*1;
    else if(calls>190 && calls<=240)
        pay=300+ (70*1) +(calls-190)*0.82;
    else
        pay=300+ (70*1) + (50*0.82) +(calls-240)*0.45;
    }
    printf("%0.2f",pay);
    return 0;
}
```

Flow Graph:



Cyclomatic Complexity:

The cyclomatic complexity of the above flow graph is,

Number of edges=13

Number of nodes=10

Therefore, Cyclomatic Complexity = Number of edges-Number of nodes+2

= 13-10+2

= 5

Independents Paths:

The possible independent paths are,

Path-1: 1-2-10

Path-2: 1-2-3-4-10

Path-3: 1-2-3-5-6-10

Path-4: 1-2-3-5-7-8-10

Path-5:1-2-3-5-7-9-10

Test Matrix:

Path	1	2	3	4	5	6	7	8	9	10
1	✓	✓								✓
2	✓	✓	✓	✓						✓
3	✓	✓	✓		✓	✓				✓
4	✓	✓	✓		✓		✓	✓		✓
5	✓	✓	✓		✓		✓		✓	✓

Test suite design:

Project Name: Bill Payment Calculation

Test case id:ID_2
Test Priority: low
Module Name: Bill payment
Test Title: White box
Test Executed Date:
Description: Test case for problem using Path Testing

Test Designed by: Jashuva
Test Designed Date:
Test Executed by: Jashuva

Pre-Condition: Customer should make at least one call

Stage	Test steps	Test Data	Expected Result	Actual Result	status (Pass/Fail)	Remarks
1	path 1	20	300.00	300.00	Pass	Nil
2	path 2	150	330.00	330.00	Pass	Nil
3	path 3	210	386.39	386.39	Pass	Nil
4	path 4	250	415.50	415.50	Pass	Nil

Post Condition: Bill payment of a customer is calculated based on the number of calls

Result: Thus, design of test cases for the problem using path testing is done successfully.

TASK 3:

Aim: To perform parameterized testing using Junit

Procedure:

Steps:

1. Creating Java Project
   - Click on File and select New project
   - Enter project name as com.vogella.Junit.Addition
   - Click on Next and then on Finish
2. Creating java Test project
   - Right click on com.vogella.Junit.Addition
   - Click on properties and select tab build path
   - Click on source and click on Create New Folder
   - Give the folder name as Test and click on next
   - Click on Finish and then on OK
3. Creating java class
   - Right click on com.vogella.Junit.Addition and click on New
   - Click on class and give class name as Add
   - Click on Finish.
   - Type the following code.

Add.java

```
package com.vogella.JUnit.Addition;

public class Add {

                public int addNumbers(int a,int b)
                {
                        int sum=a+b;
                        return sum;
                }

}
```

4. Create java test class
   - Right click on com.vogella.Junit.Addition and then click on new
   - Click on Junit test case
   - Change the name of folder src to test in source folder tab
   - Click on browse and select Add class and click on Next

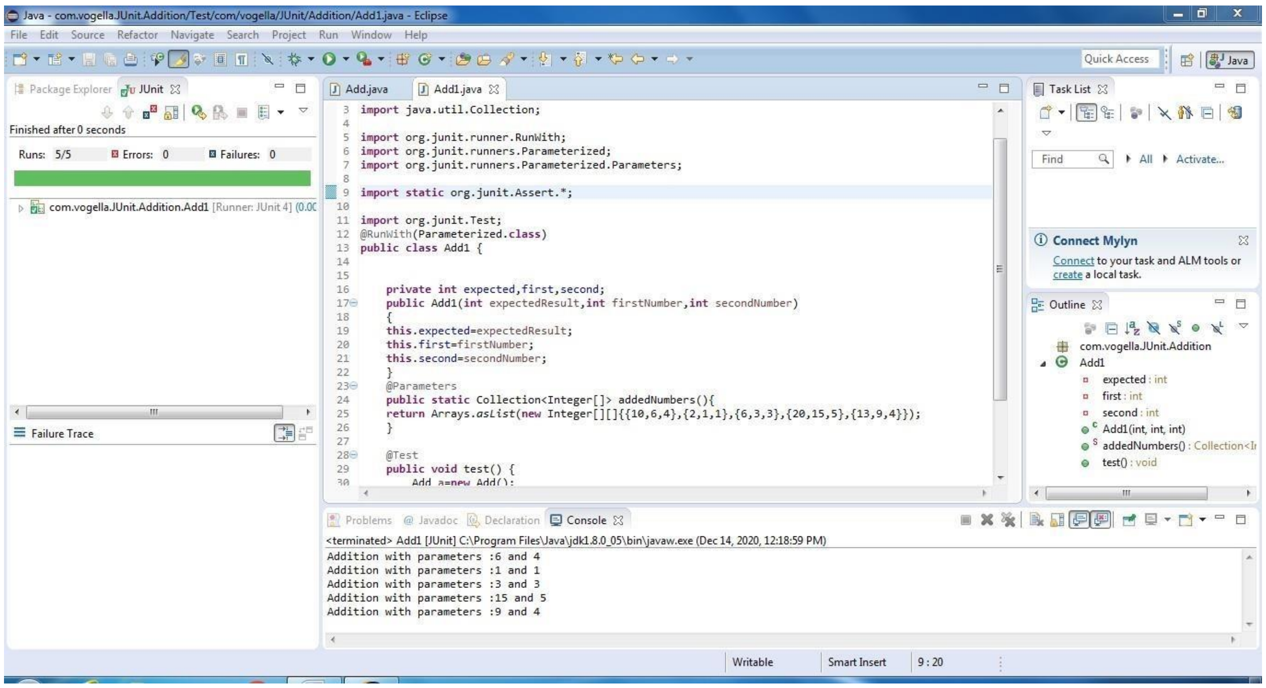
- Click on the Finish and then on OK
- Add the following code

Add1.java

```
package com.vogella.JUnit.Addition;
import java.util.Arrays;
import java.util.Collection;

import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;

import static org.junit.Assert.*;

import org.junit.Test;
@RunWith(Parameterized.clas
s) public class Add1 {


        private int expected,first,second;
        public Add1(int expectedResult,int firstNumber,int secondNumber)
        {
        this.expected=expectedResul
        t; this.first=firstNumber;
        this.second=secondNumber;
        }
        @Parameters
        public static Collection<Integer[]> addedNumbers(){
        return Arrays.asList(new Integer[][]{{10,6,4},{2,1,1},{6,3,3},{20,15,5},{13,9,4}});
        }

        @Test
        public void test() {
                Add a=new Add();
                System.out.println("Addition with parameters :"+first+" and "+second);
                assertEquals(expected,a.addNumbers(first,second));

        }

}
```

Outputs:

Pass case for Addition



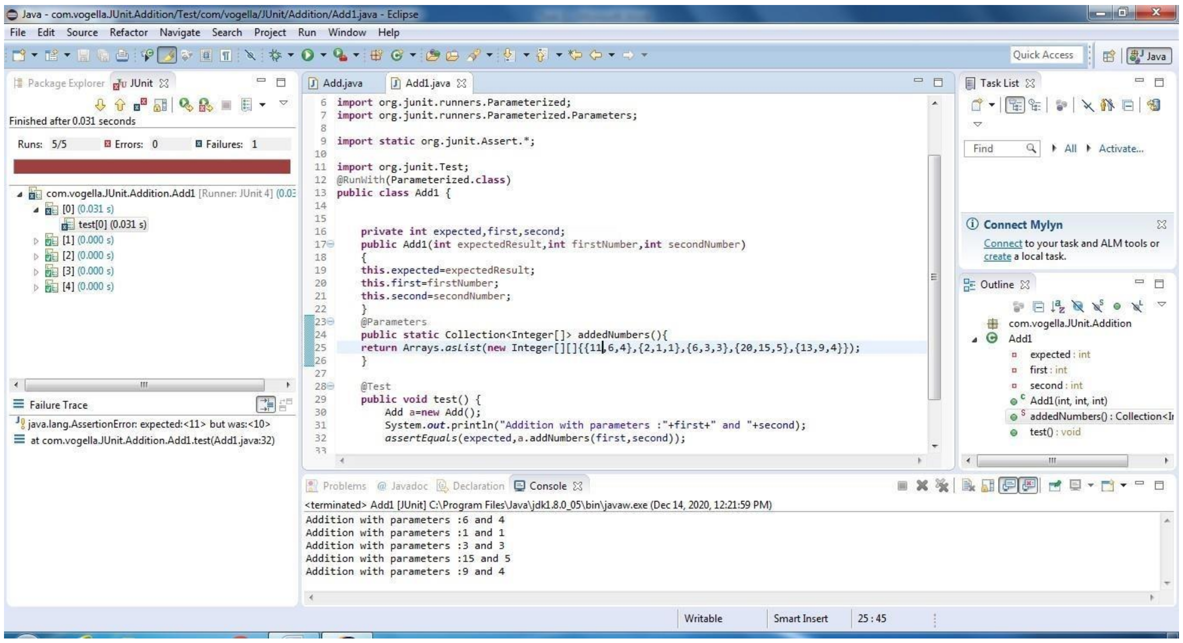
Java - com.vogella.JUnit.Addition/Test/com/vogella/JUnit/Addition/Add1.java - Eclipse

```
Finished after 0 seconds
Runs:  5/5    Errors:  0    Failures:  0

com.vogella.JUnit.Addition.Add1 [Runner: JUnit 4] (0.00
```

```java
import java.util.Collection;

import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;

import static org.junit.Assert.*;

import org.junit.Test;
@RunWith(Parameterized.class)
public class Add1 {


    private int expected,first,second;
    public Add1(int expectedResult,int firstNumber,int secondNumber)
    {
    this.expected=expectedResult;
    this.first=firstNumber;
    this.second=secondNumber;
    }
    @Parameters
    public static Collection<Integer[]> addedNumbers(){
    return Arrays.asList(new Integer[][]{{10,6,4},{2,1,1},{6,3,3},{20,15,5},{13,9,4}});
    }

    @Test
    public void test() {
        Add a=new Add();
```

```
<terminated> Add1 [JUnit] C:\Program Files\Java\jdk1.8.0_05\bin\javaw.exe (Dec 14, 2020, 12:18:59 PM)
Addition with parameters :6 and 4
Addition with parameters :1 and 1
Addition with parameters :3 and 3
Addition with parameters :15 and 5
Addition with parameters :9 and 4
```

Fail case for Addition



Java - com.vogella.JUnit.Addition/Test/com/vogella/JUnit/Addition/Add1.java - Eclipse

```
Finished after 0.031 seconds
Runs:  5/5    Errors:  0    Failures:  1

com.vogella.JUnit.Addition.Add1 [Runner: JUnit 4] (0.03
  [0] (0.031 s)
    test[0] (0.031 s)
  [1] (0.000 s)
  [2] (0.000 s)
  [3] (0.000 s)
  [4] (0.000 s)

Failure Trace
java.lang.AssertionError: expected:<11> but was:<10>
at com.vogella.JUnit.Addition.Add1.test(Add1.java:32)
```

```java
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;

import static org.junit.Assert.*;

import org.junit.Test;
@RunWith(Parameterized.class)
public class Add1 {


    private int expected,first,second;
    public Add1(int expectedResult,int firstNumber,int secondNumber)
    {
    this.expected=expectedResult;
    this.first=firstNumber;
    this.second=secondNumber;
    }
    @Parameters
    public static Collection<Integer[]> addedNumbers(){
    return Arrays.asList(new Integer[][]{{11,6,4},{2,1,1},{6,3,3},{20,15,5},{13,9,4}});
    }

    @Test
    public void test() {
        Add a=new Add();
        System.out.println("Addition with parameters :"+first+" and "+second);
        assertEquals(expected,a.addNumbers(first,second));
```

```
<terminated> Add1 [JUnit] C:\Program Files\Java\jdk1.8.0_05\bin\javaw.exe (Dec 14, 2020, 12:21:59 PM)
Addition with parameters :6 and 4
Addition with parameters :1 and 1
Addition with parameters :3 and 3
Addition with parameters :15 and 5
Addition with parameters :9 and 4
```

Test suite design:

Project Name: Parameterized Testing

Test case id: ID_3
Test Priority: low
Module Name: Junit Testing
Test Title: Blackbox testing
Test Executed Date:
Description: Test case for problem using Parameterized Testing

Test Designed by: Jashuva
Test Designed Date:
Test Executed by: Jashuva

Pre-Condition: User should give two input numbers and one expected output

Stage	Test Steps	Test Data	Expected Result	Actual Result	status (Pass/Fail)	Remarks
1	Two valid integer values	6,4	10	1 0	Pass	Nil
2		1,1	2	2	Pass	Nil
3		3,3	6	6	Pass	Nil
4		15,5	20	2 0	Pass	Nil
5		9,4	13	1 1	Fail	Nil

Post condition: Addition of two numbers should match the defined expected

Result: Performing parameterized testing using Junit has been done successfully.

TASK 4:

Aim : To perform parameterized testing using Junit

Procedure:

Steps:

1. Creating Java Project
   - Click on File and select New project
   - Enter project name as com.vogella.Junit.Triangle
   - Click on Next and then on Finish
2. Creating java Test project
   - Right click on com.vogella.Junit. Triangle
   - Click on properties and select tab build path
   - Click on source and click on Create New Folder
   - Give the folder name as Test and click on next
   - Click on Finish and then on OK
3. Creating java class
   - Right click on com.vogella.Junit. Triangle and click on New
   - Click on class and give class name as Triangle
   - Click on Finish
   - Type the following code

Triangle.java

```
package com.vogella.JUnit.Triangle;
public class Triangle {
        public int check(int a,int b,int c)
        {
                if(a==b && b==c && a==c)
                        return 1;
                else if(a==b || b==c || c==a)
                        return 2;
                else
                        return 3;
        }
}
```

4. Create java test class
   - Right click on com.vogella.Junit.Triangle and then click on new
   - Click on Junit test case
   - Change the name of folder src to test in source folder tab
   - Click on browse and select Triangle1 class and click on Next

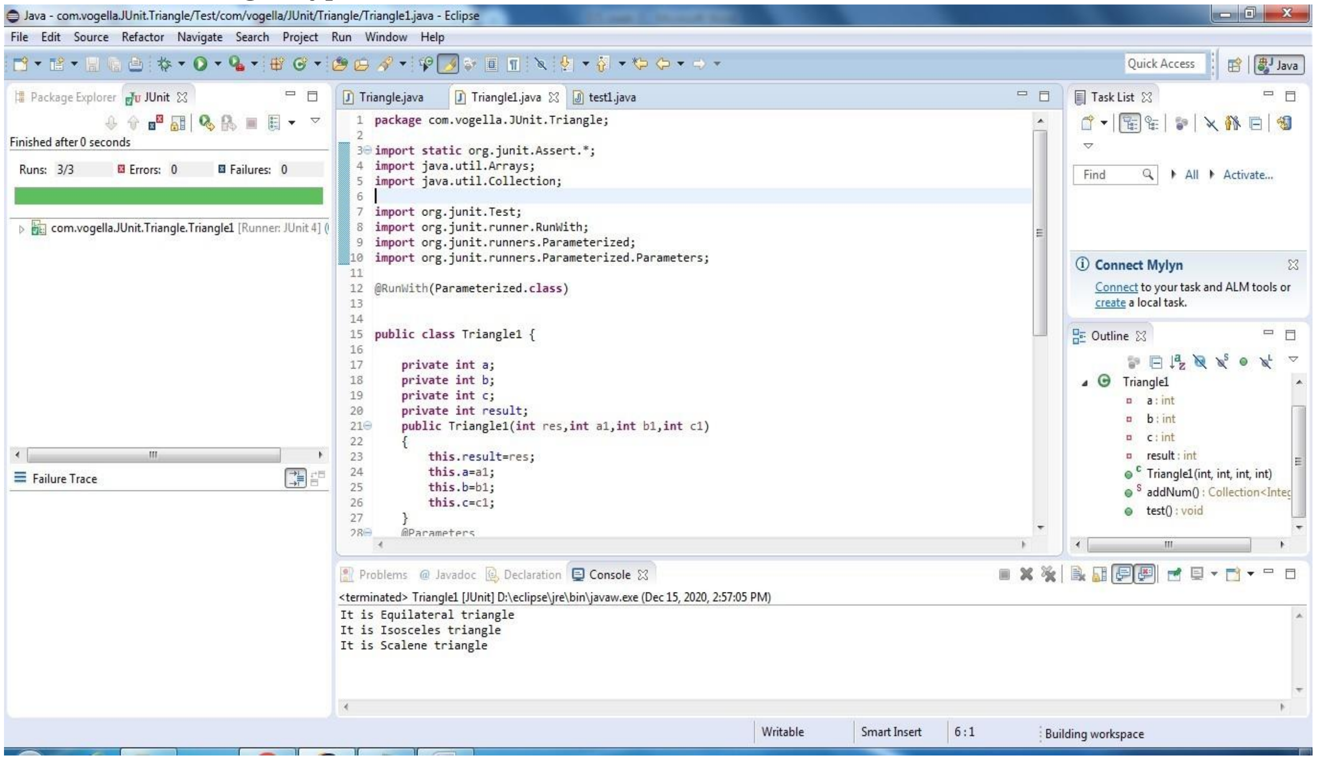
- Click on the Finish and then on OK
- Add the following code

Triangle1.java

```
package com.vogella.JUnit.Triangle;

import static org.junit.Assert.*;
import java.util.Arrays;
import java.util.Collection;

import org.junit.Test;
import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;

@RunWith(Parameterized.class)
public class Triangle1 {

        private int a;
        private int b;
        private int c;
        private int result;
        public Triangle1(int res,int a1,int b1,int c1)
        {
                this.result=res;
                this.a=a1;
                this.b=b1;
                this.c=c1;
        }
        @Parameters
        public static Collection<Integer[]> addNum()
        {
                return Arrays.asList(new Integer[][]{{1,2,2,2},{2,3,2,2},{3,1,2,3}});
        }
        @Test
        public void test() {
                Triangle t=new Triangle();
                int n=t.check(a, b, c);
                switch(n)
                {
                case 1: System.out.println("It is Equilateral triangle");
                                break;
                case 2: System.out.println("It is Isosceles triangle");
                                break;
                case 3: System.out.println("It is Scalene triangle");
                                break;
                default: System.out.println("It is not a valid triangle");
                                break;
                }
                assertEquals(result,t.check(a, b,c));
        }

}
```

Outputs:

Pass case for Triangle Type



Finished after 0 seconds

Runs: 3/3 Errors: 0 Failures: 0

com.vogella.JUnit.Triangle.Triangle1 [Runner: JUnit 4]

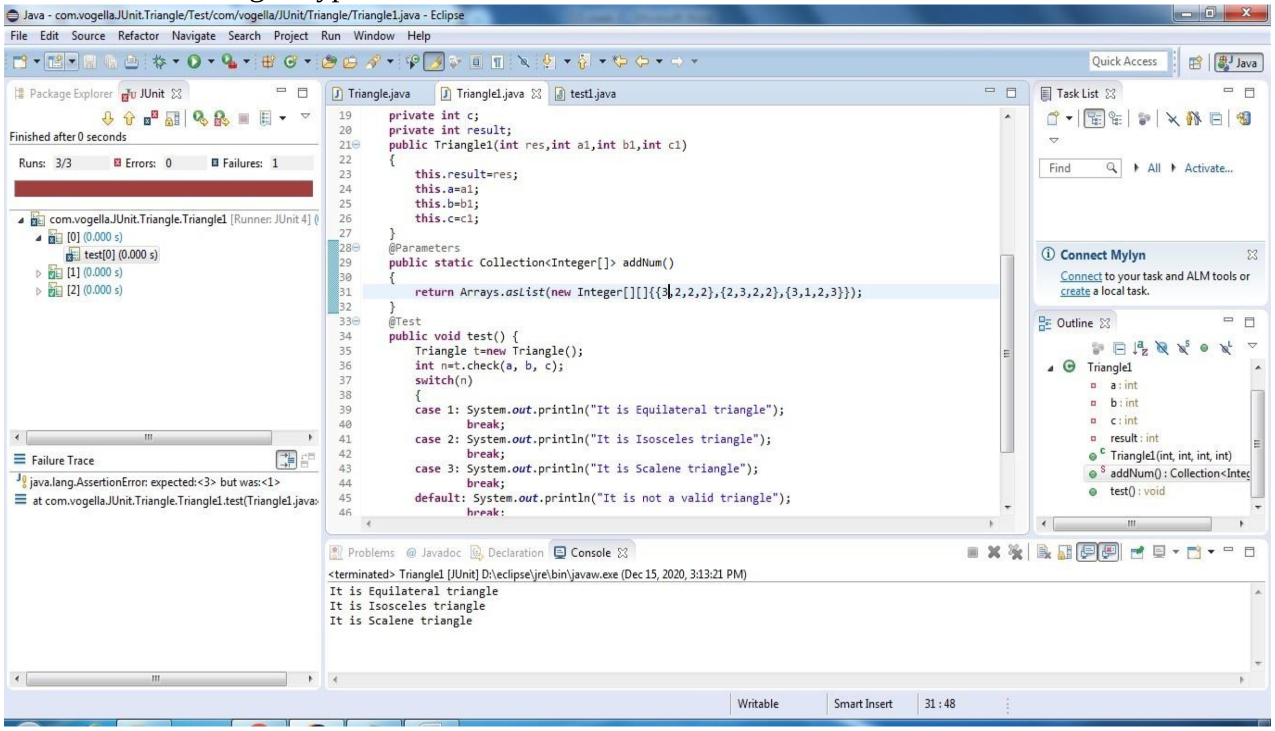
```
package com.vogella.JUnit.Triangle;

import static org.junit.Assert.*;
import java.util.Arrays;
import java.util.Collection;

import org.junit.Test;
import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;

@RunWith(Parameterized.class)


public class Triangle1 {

    private int a;
    private int b;
    private int c;
    private int result;
    public Triangle1(int res,int a1,int b1,int c1)
    {
        this.result=res;
        this.a=a1;
        this.b=b1;
        this.c=c1;
    }
    @Parameters
```

Connect to your task and ALM tools or create a local task.

Triangle1
a : int
b : int
c : int
result : int
Triangle1(int, int, int, int)
addNum() : Collection<Integ
test() : void

```
<terminated> Triangle1 [JUnit] D:\eclipse\jre\bin\javaw.exe (Dec 15, 2020, 2:57:05 PM)
It is Equilateral triangle
It is Isosceles triangle
It is Scalene triangle
```

Fail case for Triangle Type



Finished after 0 seconds

Runs: 3/3 Errors: 0 Failures: 1

com.vogella.JUnit.Triangle.Triangle1 [Runner: JUnit 4]
[0] (0.000 s)
test[0] (0.000 s)
[1] (0.000 s)
[2] (0.000 s)

```
java.lang.AssertionError: expected:<3> but was:<1>
at com.vogella.JUnit.Triangle.Triangle1.test(Triangle1.java:
```

```
    private int c;
    private int result;
    public Triangle1(int res,int a1,int b1,int c1)
    {
        this.result=res;
        this.a=a1;
        this.b=b1;
        this.c=c1;
    }
    @Parameters
    public static Collection<Integer[]> addNum()
    {
        return Arrays.asList(new Integer[][]{{3,2,2,2},{2,3,2,2},{3,1,2,3}});
    }
    @Test
    public void test() {
        Triangle t=new Triangle();
        int n=t.check(a, b, c);
        switch(n)
        {
        case 1: System.out.println("It is Equilateral triangle");
                break;
        case 2: System.out.println("It is Isosceles triangle");
                break;
        case 3: System.out.println("It is Scalene triangle");
                break;
        default: System.out.println("It is not a valid triangle");
                break;
```

Connect to your task and ALM tools or create a local task.

Triangle1
a : int
b : int
c : int
result : int
Triangle1(int, int, int, int)
addNum() : Collection<Integ
test() : void

```
<terminated> Triangle1 [JUnit] D:\eclipse\jre\bin\javaw.exe (Dec 15, 2020, 3:13:21 PM)
It is Equilateral triangle
It is Isosceles triangle
It is Scalene triangle
```

Test suite design:

Project Name: Parameterized Testing						
Test case id: ID_4 **Test Priority**: low **Module Name**: Junit Testing **Test Title**: Blackbox testing **Test Executed Date**: **Description:** Test case for problem using Parameterized Testing					**Test Designed by:** Jashuva **Test Designed Date**: **Test Executed by**: Jashuva	
Pre-Condition: User should give three input numbers and one expected output						
Stage	**Test Steps**	**Test Data**	**Expected Result**	**Actual Result**	**status (Pass/Fail)**	**Remarks**
1	Three valid integer values	1,1,1	1	1	Pass	Nil
2		4,3,3	2	2	Pass	Nil
3		8,2,5	3	3	Pass	Nil
4		1,2,1	2	2	Pass	Nil
5		3,2,2	1	3	Fail	Nil
Post condition: Expected result should match with value returned by function						

Result: Performing parameterized testing using Junit has been done successfully.

TASK 5:

Aim: To perform parameterized testing using Junit

Procedure:

Steps:

1. Creating Java Project
   - Click on File and select New project
   - Enter project name as com.vogella.Junit.Prime
   - Click on Next and then on Finish
2. Creating java Test project
   - Right click on com.vogella.Junit.Prime
   - Click on properties and select tab build path
   - Click on source and click on Create New Folder
   - Give the folder name as Test and click on next
   - Click on Finish and then on OK
3. Creating java class
   - Right click on com.vogella.Junit.Prime and click on New
   - Click on class and give class name as Prime
   - Click on Finish
   - Type the following code

Prime.java

```
package com.vogella.JUnit.Prime;

public class Prime
{
public int isPrime(int n)
{
        int c=0;
        for(int i=1;i<n;i=i+1)
        {
                if(n%i==0)
                        c=c+1;
                if(c>1)
                        return 0;
        }
        if(c==1)
                return 1;
        return 0;
}
}
```

4.Create java test class

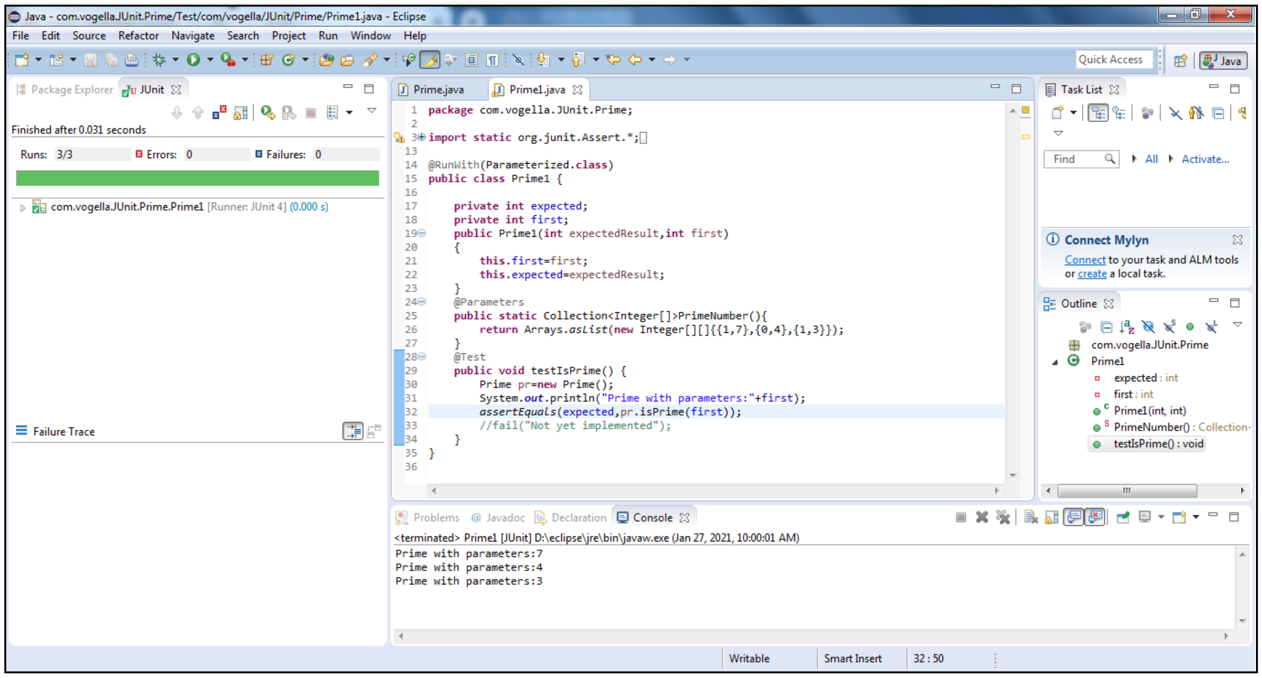
- Right click on com.vogella.JUnit.Prime and then click on new.
- Click on JUnit test case
- Change the name of folder src to test in source folder tab
- Click on browse and select Prime class and click on Next
- Click on Finish and then on OK
- Add the following code

Prime1.java

```
package com.vogella.JUnit.Prime;
import static org.junit.Assert.*;
import java.lang.reflect.Array;
import java.util.Arrays;
import java.util.Collection;
import org.junit.Test;
import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.junit.runners.Parameterized.Parameters;

@RunWith(Parameterized.class)
public class Prime1 {

	private int expected;
	private int first;
	public Prime1(int expectedResult,int first)
	{
		this.first=first;
		this.expected=expectedResult;
	}
	@Parameters
	public static Collection<Integer[]>PrimeNumber(){
		return Arrays.asList(new Integer[][]{{1,7},{1,4},{1,3}});
	}
	@Test
	public void testIsPrime() {
		Prime pr=new Prime();
		System.out.println("Prime with parameters:"+first);
		assertEquals(expected,pr.isPrime(first));
	}
}
```

Output:

Pass case for Prime


Java - com.vogella.JUnit.Prime/Test/com/vogella/JUnit/Prime/Prime1.java - Eclipse

Finished after 0.031 seconds

Runs: 3/3 Errors: 0 Failures: 0

com.vogella.JUnit.Prime.Prime1 [Runner: JUnit 4] (0.000 s)

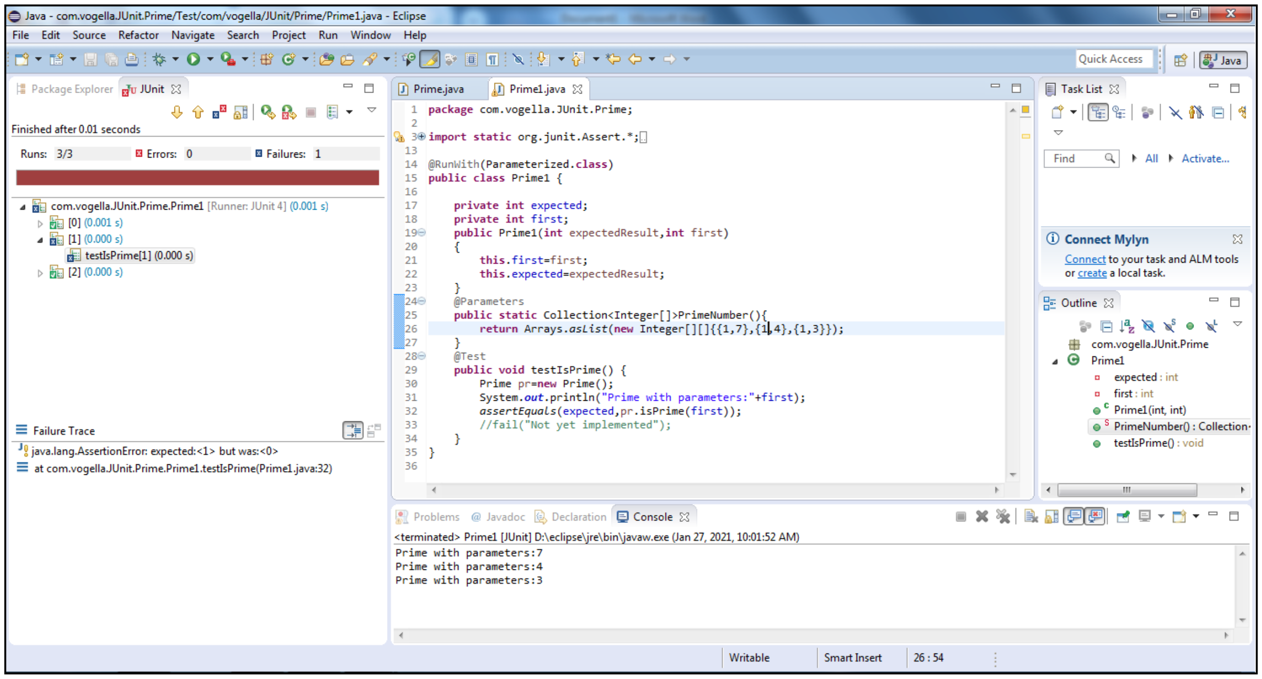
Failure Trace

```
package com.vogella.JUnit.Prime;

import static org.junit.Assert.*;

@RunWith(Parameterized.class)
public class Prime1 {

    private int expected;
    private int first;
    public Prime1(int expectedResult,int first)
    {
        this.first=first;
        this.expected=expectedResult;
    }
    @Parameters
    public static Collection<Integer[]>PrimeNumber(){
        return Arrays.asList(new Integer[][]{{1,7},{0,4},{1,3}});
    }
    @Test
    public void testIsPrime() {
        Prime pr=new Prime();
        System.out.println("Prime with parameters:"+first);
        assertEquals(expected,pr.isPrime(first));
        //fail("Not yet implemented");
    }
}
```

```
<terminated> Prime1 [JUnit] D:\eclipse\jre\bin\javaw.exe (Jan 27, 2021, 10:00:01 AM)
Prime with parameters:7
Prime with parameters:4
Prime with parameters:3
```

Writable Smart Insert 32 : 50

Fail case for Prime


Java - com.vogella.JUnit.Prime/Test/com/vogella/JUnit/Prime/Prime1.java - Eclipse

Finished after 0.01 seconds

Runs: 3/3 Errors: 0 Failures: 1

com.vogella.JUnit.Prime.Prime1 [Runner: JUnit 4] (0.001 s)
- [0] (0.001 s)
- [1] (0.000 s)
  - testIsPrime[1] (0.000 s)
- [2] (0.000 s)

Failure Trace

```
java.lang.AssertionError: expected:<1> but was:<0>
at com.vogella.JUnit.Prime.Prime1.testIsPrime(Prime1.java:32)
```

```
package com.vogella.JUnit.Prime;

import static org.junit.Assert.*;

@RunWith(Parameterized.class)
public class Prime1 {

    private int expected;
    private int first;
    public Prime1(int expectedResult,int first)
    {
        this.first=first;
        this.expected=expectedResult;
    }
    @Parameters
    public static Collection<Integer[]>PrimeNumber(){
        return Arrays.asList(new Integer[][]{{1,7},{1,4},{1,3}});
    }
    @Test
    public void testIsPrime() {
        Prime pr=new Prime();
        System.out.println("Prime with parameters:"+first);
        assertEquals(expected,pr.isPrime(first));
        //fail("Not yet implemented");
    }
}
```

```
<terminated> Prime1 [JUnit] D:\eclipse\jre\bin\javaw.exe (Jan 27, 2021, 10:01:52 AM)
Prime with parameters:7
Prime with parameters:4
Prime with parameters:3
```

Writable Smart Insert 26 : 54

Test suite design:

Project Name: Parameterized Testing

Test case id: ID_5 **Test Priority**: low **Module Name**: Junit Testing **Test Title**: Blackbox testing **Test Executed Date**: **Description:** Test case for problem using Parameterized Testing	**Test Designed by:** Jashuva **Test Designed Date**: **Test Executed by**: Jashuva
Pre-Condition: User should give one input number and one expected output	

Stage	**Test Steps**	**Test Data**	**Expected Result**	**Actual Result**	**status (Pass/Fail)**	**Remarks**
1	One valid integer value	6	0	0	Pass	Nil
2		13	1	1	Pass	Nil
3		29	1	1	Pass	Nil
4		15	0	0	Pass	Nil
5		9	0	1	Fail	Nil
Post condition: Expected result should match with value returned by function						

Result: Performing parameterized testing using Junit has been done successfully.

TASK 6:

Aim: To perform testing visual c# using NUnit.

Procedure:

Steps:

1. Creating Class Library.
    - Click on File and select New project
    - Click on Visual C# and rename it as Leela64
    - Click on Finish
2. Add the following code

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
```

```
namespace Leela64
{
    public class Addition
    {
        public int add(int x, int y)
        {
            return (x + y);
        }
    }
    public class Subtraction
    {
        public int sub(int x, int y)
        {
            return (x - y);
        }
    }
    public class Division
    {
        public int div(int x, int y)
        {
            return (x / y);
        }
    }

    public class Multiplication
    {
        public int mul(int x, int y)
        {
            return (x * y);
        }
    }
}
```

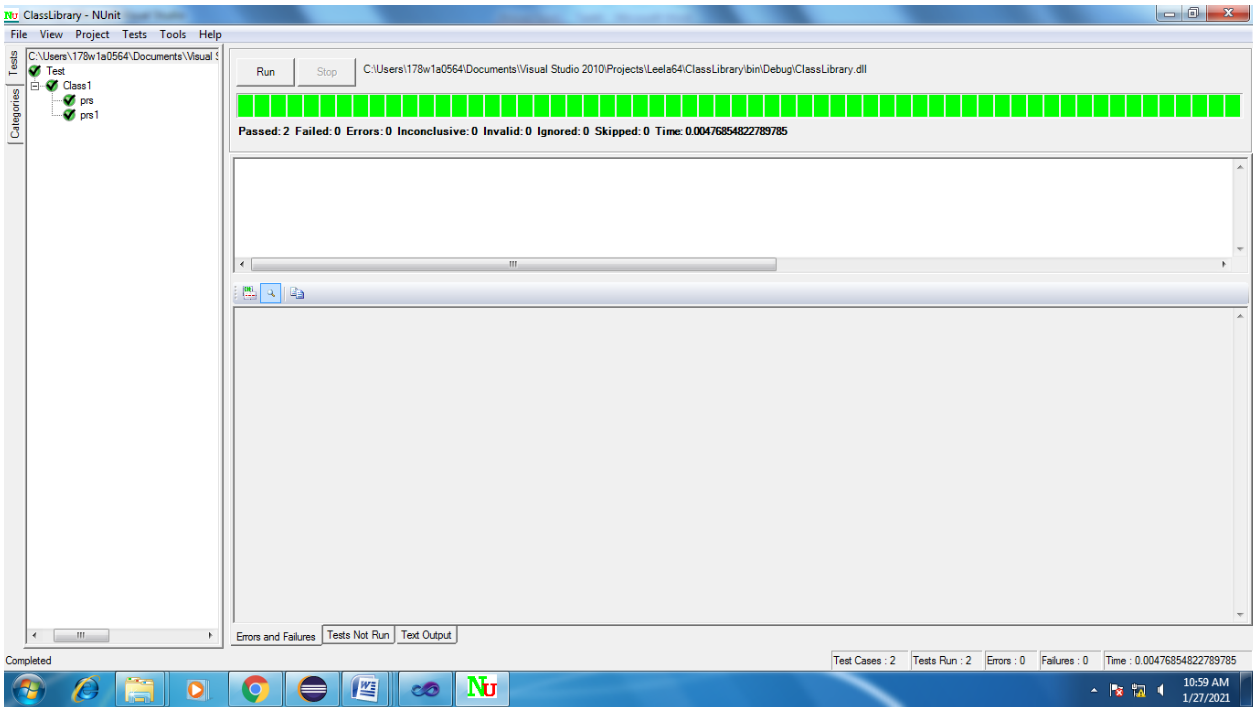
3. Add new class Library
    - Right click on Project in Solution explorer.
    - Click on Add and New Project(Class Library)
    - Type the following code

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using NUnit.Framework;
using Leela64;
namespace Test
{
    [TestFixture]
    public class Class1
    {
        [Test]
        public void prs()
        {
            Multiplication m1 = new Multiplication();
            Addition a1 = new Addition();
            Subtraction s1 = new Subtraction();
            Division d1 = new Division();
            Assert.AreEqual(20, m1.mul(5, 4));
            Assert.AreEqual(1, s1.sub(8, 7));
            Assert.AreEqual(7, a1.add(3, 4));
            Assert.AreEqual(1, d1.div(5, 5));
        }
        [Test]
        public void prs1()
        {
            Multiplication m1 = new Multiplication();
            Addition a1 = new Addition();
            Subtraction s1 = new Subtraction();
            Division d1 = new Division();
            Assert.AreEqual(10, m1.mul(2, 4));
            Assert.AreEqual(1, s1.sub(8, 7));
            Assert.AreEqual(7, a1.add(3, 4));
            Assert.AreEqual(1, d1.div(5, 5));
        }

    }
}
```

4. Add references
    - Right Click on Test and click on Add references
    - Add the Existing Project and also nunit.framework.dll
    - Click on OK
5. Build Solution
    - Click on Build
    - Now click on Build Solution
6. Testing using NUnit
    - Open NUnit and click on File
    - Click on Open project and select the Visual Project
    - Select the test code project.
    - Click on bin and then on debug and then on Test.nunit.dll
    - Click on Run

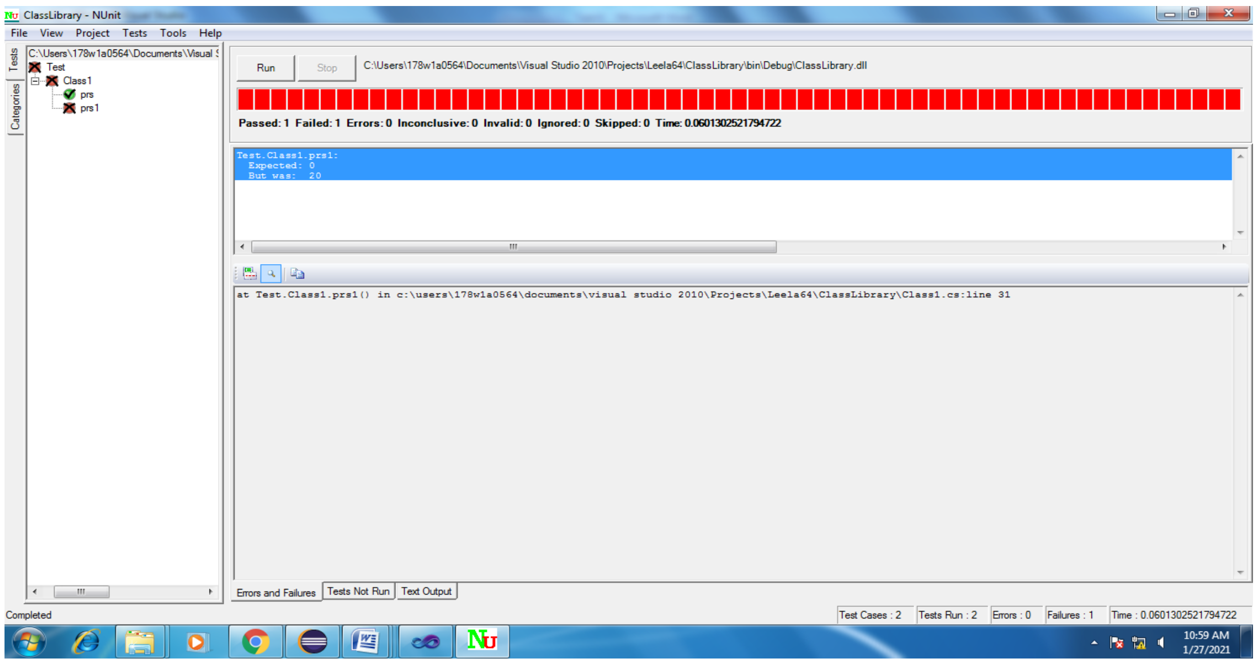
Output:

Pass Case



```
C:\Users\178w1a0564\Documents\Visual Studio 2010\Projects\Leela64\ClassLibrary\bin\Debug\ClassLibrary.dll
Passed: 2  Failed: 0  Errors: 0  Inconclusive: 0  Invalid: 0  Ignored: 0  Skipped: 0  Time: 0.00476854822789785

C:\Users\178w1a0564\Documents\Visual S
 Test
  Class1
   prs
   prs1

Completed   Test Cases : 2   Tests Run : 2   Errors : 0   Failures : 0   Time : 0.00476854822789785
10:59 AM 1/27/2021
```

Fail Case



```
C:\Users\178w1a0564\Documents\Visual Studio 2010\Projects\Leela64\ClassLibrary\bin\Debug\ClassLibrary.dll
Passed: 1  Failed: 1  Errors: 0  Inconclusive: 0  Invalid: 0  Ignored: 0  Skipped: 0  Time: 0.0601302521794722

Test.Class1.prs1:
  Expected: 0
  But was:  20

at Test.Class1.prs1() in c:\users\178w1a0564\documents\visual studio 2010\Projects\Leela64\ClassLibrary\Class1.cs:line 31

C:\Users\178w1a0564\Documents\Visual S
 Test
  Class1
   prs
   prs1

Completed   Test Cases : 2   Tests Run : 2   Errors : 0   Failures : 1   Time : 0.0601302521794722
10:59 AM 1/27/2021
```

Test suite design:

Project Name: NUnit Testing

Test case id: ID_6	**Test Designed by:** Jashuva
Test Priority: low	**Test Designed Date**:
Module Name: Nunit Testing	**Test Executed by**: Jashuva
Test Title: Blackbox testing	
Test Executed Date:	
Description: Test case for problem using NUnit Testing	

Pre-Condition: User should give two input numbers and one expected output

Stage	Test Steps	Test Data	Expected Result	Actual Result	status (Pass/Fail)	Remarks
1	Addition	6,4	10	10	Pass	Nil
2	Subtraction	7,3	4	4	Pass	Nil
3	Multiplication	2,4	8	8	Pass	Nil
4	Division	6,3	2	3	Fail	Nil

Post condition: Expected result should match with value returned by function

Result: Performing testing visual c# using NUnit has been implemented successfully.

TASK 7:

Aim: To perform testing visual c# using NUnit.

Procedure:

Steps:

1. Creating Class Library.
   - Click on File and select New project
   - Click on Visual C# and rename it as Triangle64
   - Click on Finish
2. Add the following code

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
namespace Triangle64
{
    public class Triangle
    {
        public int ischeck(int x, int y,int z)
        {
           if(x==y && y==z && z==x)
           return 1;
           if(x==y || y==z || z==x)
           return 2;
           else
            return 3;
        }
    }
}
```

3. Add new class Library
   - Right click on Project in Solution explorer.
   - Click on Add and New Project(Class Library)
   - Type the following code

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using NUnit.Framework;
using Triangle64;
namespace Test
{
    [TestFixture]
    public class Class1
    {
        [Test]
        public void prs()
        {
            Triangle d1=new Triangle();
            Assert.AreEqual(1, d1.ischeck(5,5,5));
        }

    }
}
```

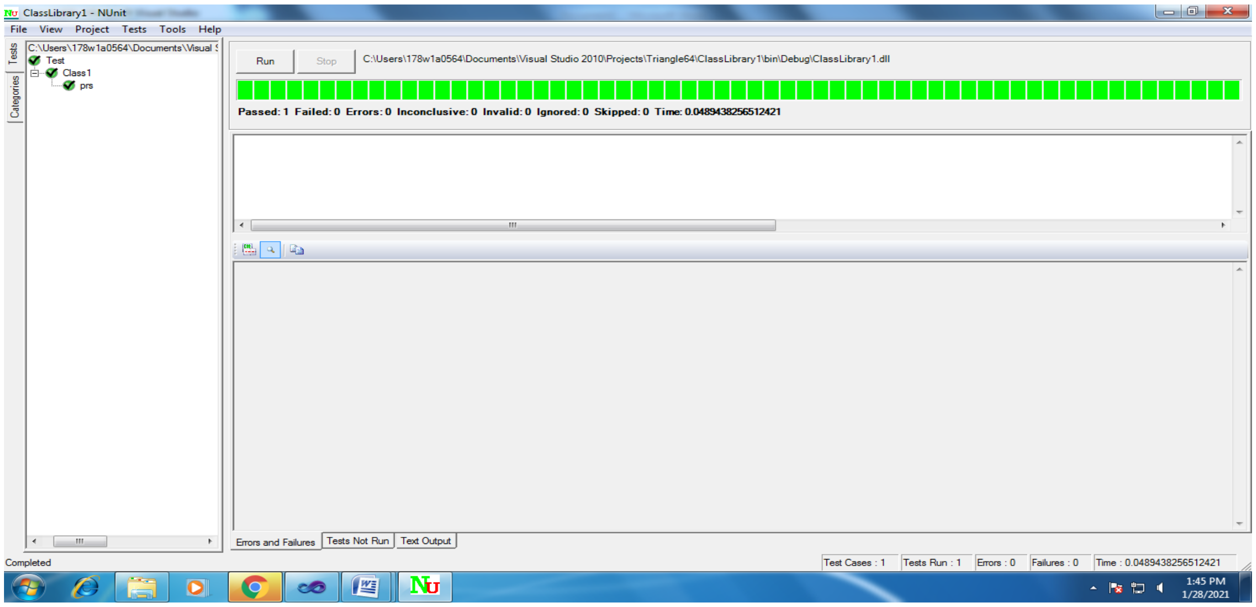
4. Add references
   - Right Click on Test and click on Add references
   - Add the Existing Project and also nunit.framework.dll
   - Click on OK
5. Build Solution
   - Click on Build

- Now click on Build Solution

6. Testing using NUnit
    - Open NUnit and click on File
    - Click on Open project and select the Visual Project
    - Select the test code project.
    - Click on bin and then on debug and then on Test.nunit.dll
    - Click on Run

Output:

Pass Case

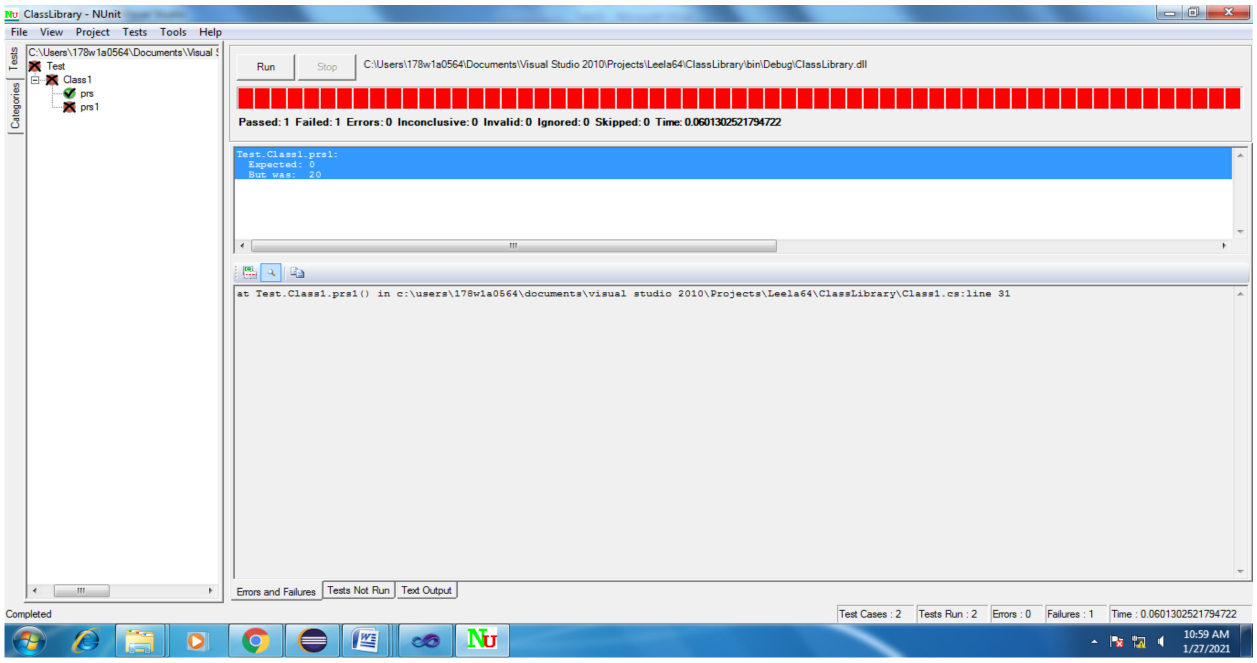


C:\Users\178w1a0564\Documents\Visual Studio 2010\Projects\Triangle64\ClassLibrary1\bin\Debug\ClassLibrary1.dll

```
Passed: 1  Failed: 0  Errors: 0  Inconclusive: 0  Invalid: 0  Ignored: 0  Skipped: 0  Time: 0.0489438256512421
```

```
Completed    Test Cases : 1   Tests Run : 1   Errors : 0   Failures : 0   Time : 0.0489438256512421
```

Fail Case



```
C:\Users\178w1a0564\Documents\Visual Studio 2010\Projects\Leela64\ClassLibrary\bin\Debug\ClassLibrary.dll

Test
  Class1
    prs
    prs1

Passed: 1  Failed: 1  Errors: 0  Inconclusive: 0  Invalid: 0  Ignored: 0  Skipped: 0  Time: 0.0601302521794722

Test.Class1.prs1:
  Expected: 0
  But was:  20

at Test.Class1.prs1() in c:\users\178w1a0564\documents\visual studio 2010\Projects\Leela64\ClassLibrary\Class1.cs:line 31

Completed    Test Cases : 2   Tests Run : 2   Errors : 0   Failures : 1   Time : 0.0601302521794722
10:59 AM
1/27/2021
```

Test suite design:

Project Name: Parameterized Testing						
Test case id: ID_7 **Test Priority**: low **Module Name**: Nunit Testing **Test Title**: Blackbox testing **Test Executed Date**: **Description:** Test case for problem using Parameterized Testing					**Test Designed by:** Jashuva **Test Designed Date**: **Test Executed by**: Jashuva	
Pre-Condition: User should give one three input numbers and one expected output						
Stage	**Test Steps**	**Test Data**	**Expected Result**	**Actual Result**	**status (Pass/Fail)**	**Remarks**
1	Three valid integer value	1,1,1	1	1	Pass	Nil
2		1,2,3	3	3	Pass	Nil
3		2,9,9	2	2	Pass	Nil
4		1,1,5	2	2	Pass	Nil
5		9,9,9	1	3	Fail	Nil
Post condition: Expected result should match with value returned by function						

Result: Performing testing visual c# using NUnit has been implemented successfully.

TASK 8:

Aim: To perform testing visual c# using NUnit.

Procedure:

Steps:

1. Creating Class Library.
    - Click on File and select New project
    - Click on Visual C# and rename it as Prime64
    - Click on Finish
2. Add the following code

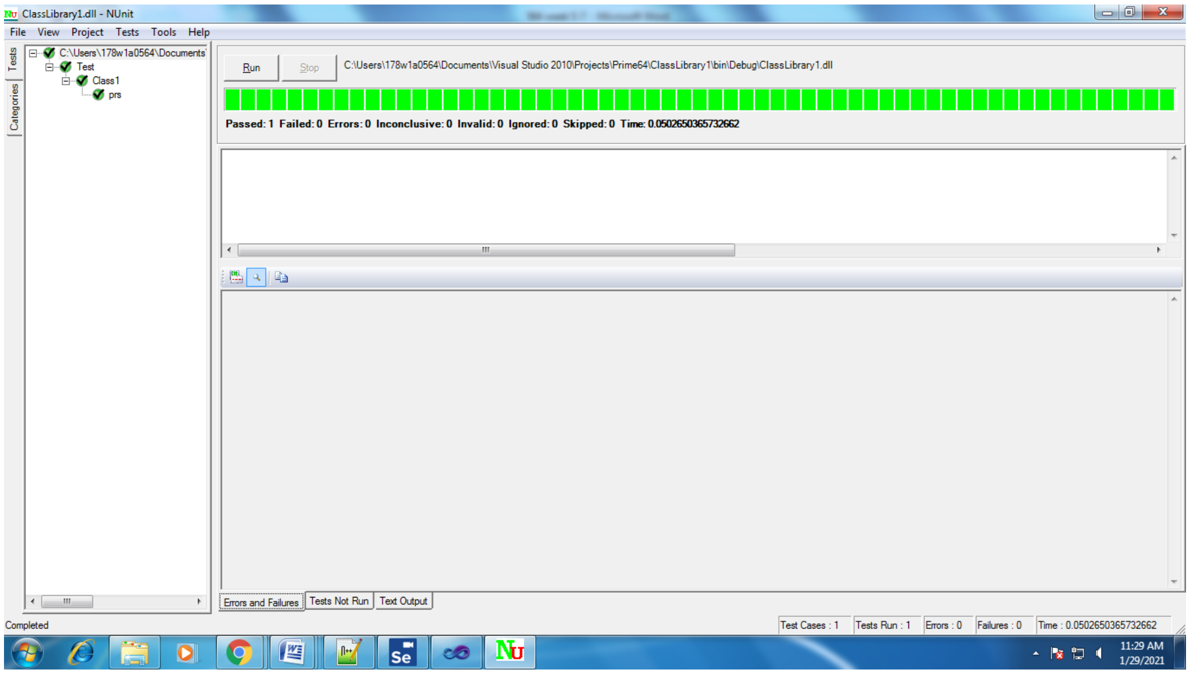
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
namespace Prime64
{
    public class Prime
    {
        public int isPrime(int n)
      {
            int c=0;
            for(int i=1;i<n;i=i+1)
            {
                if(n%i==0)
                c=c+1;
                if(c>1)
                return 0;
            }
            if(c==1)
            return 1;
            return 0;
     }
   }
}
```

3. Add new class Library
    - Right click on Project in Solution explorer.
    - Click on Add and New Project(Class Library)
    - Type the following code
    -

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using NUnit.Framework;
using Prime64;
namespace Test
{
    [TestFixture]
    public class Class1
    {
        [Test]
        public void prs()
        {
           Prime  p=new Prime();
            Assert.AreEqual(1, p.isPrime(5));
        }

    }
}
```

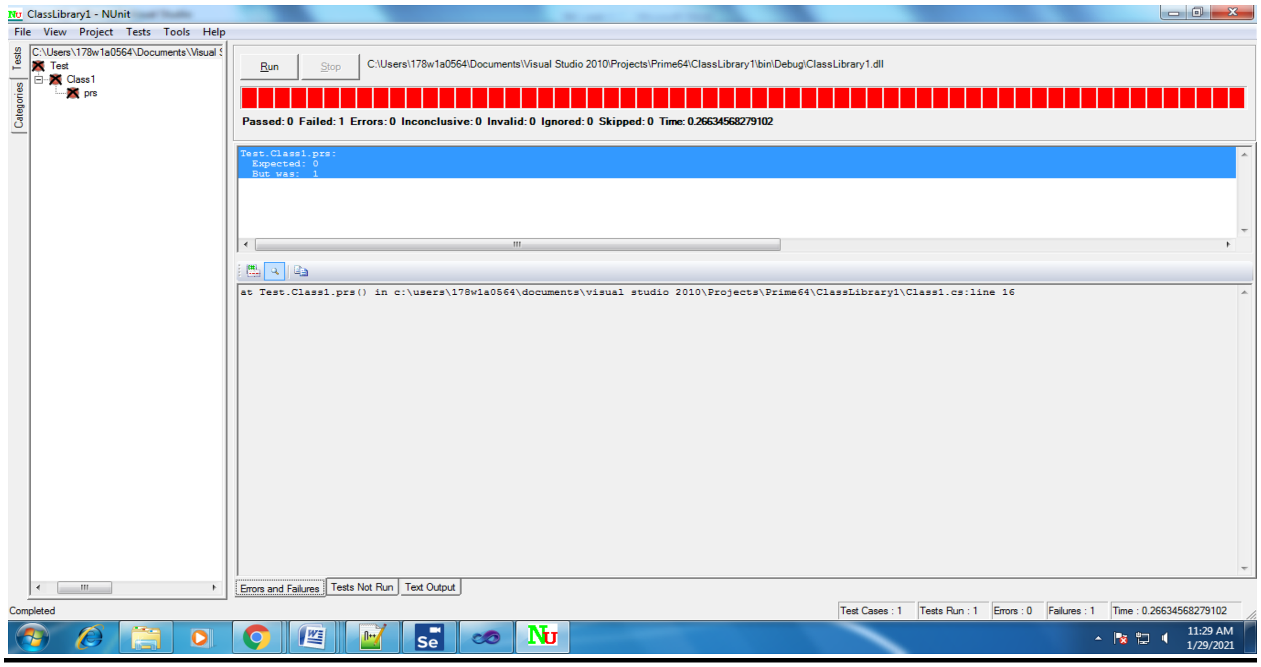
4. Add references
    - Right Click on Test and click on Add references
    - Add the Existing Project and also nunit.framework.dll
    - Click on OK
5. Build Solution
    - Click on Build
    - Now click on Build Solution
6. Testing using NUnit
    - Open NUnit and click on File
    - Click on Open project and select the Visual Project
    - Select the test code project.
    - Click on bin and then on debug and then on Test.nunit.dll
    - Click on Run

Output:
Pass Case



```
C:\Users\178w1a0564\Documents
  Test
    Class1
      prs
C:\Users\178w1a0564\Documents\Visual Studio 2010\Projects\Prime64\ClassLibrary1\bin\Debug\ClassLibrary1.dll
Passed: 1 Failed: 0 Errors: 0 Inconclusive: 0 Invalid: 0 Ignored: 0 Skipped: 0 Time: 0.0502650365732662
Completed    Test Cases : 1  Tests Run : 1  Errors : 0  Failures : 0  Time : 0.0502650365732662
11:29 AM
1/29/2021
```

Fail case



C:\Users\178w1a0564\Documents\Visual S

Test
Class1
prs

C:\Users\178w1a0564\Documents\Visual Studio 2010\Projects\Prime64\ClassLibrary1\bin\Debug\ClassLibrary1.dll

Passed: 0 Failed: 1 Errors: 0 Inconclusive: 0 Invalid: 0 Ignored: 0 Skipped: 0 Time: 0.26634568279102

```
Test.Class1.prs:
  Expected: 0
  But was:  1
```

```
at Test.Class1.prs() in c:\users\178w1a0564\documents\visual studio 2010\Projects\Prime64\ClassLibrary1\Class1.cs:line 16
```

Completed

Test Cases : 1 Tests Run : 1 Errors : 0 Failures : 1 Time : 0.26634568279102

11:29 AM 1/29/2021

Test suite design:

Project Name: Parameterized Testing

Test case id: ID_8
Test Priority: low
Module Name: Nunit Testing
Test Title: Blackbox testing
Test Executed Date:
Description: Test case for problem using Parameterized Testing

Test Designed by: Jashuva
Test Designed Date:
Test Executed by: Jashuva

Pre-Condition: User should give one input number and one expected output

Stage	**Test Steps**	**Test Data**	**Expected Result**	**Actual Result**	**status (Pass/Fail)**	**Remarks**
1	One valid integer value	6	0	0	Pass	Nil
2		13	1	1	Pass	Nil
3		29	1	1	Pass	Nil
4		15	0	0	Pass	Nil
5		9	0	1	Fail	Nil

Post condition: Expected result should match with value returned by function

Result: Performing testing visual c# using NUnit has been implemented successfully.

TASK 9:

Aim: To perform record play back using Selenium IDE Script.

Description:

The entire script creation process can be classified into 3 chunks:

Process 1: Recording – Selenium IDE aids the user to record user interactions with the browser and thus the recorded actions as a whole are termed as Selenium IDE script.

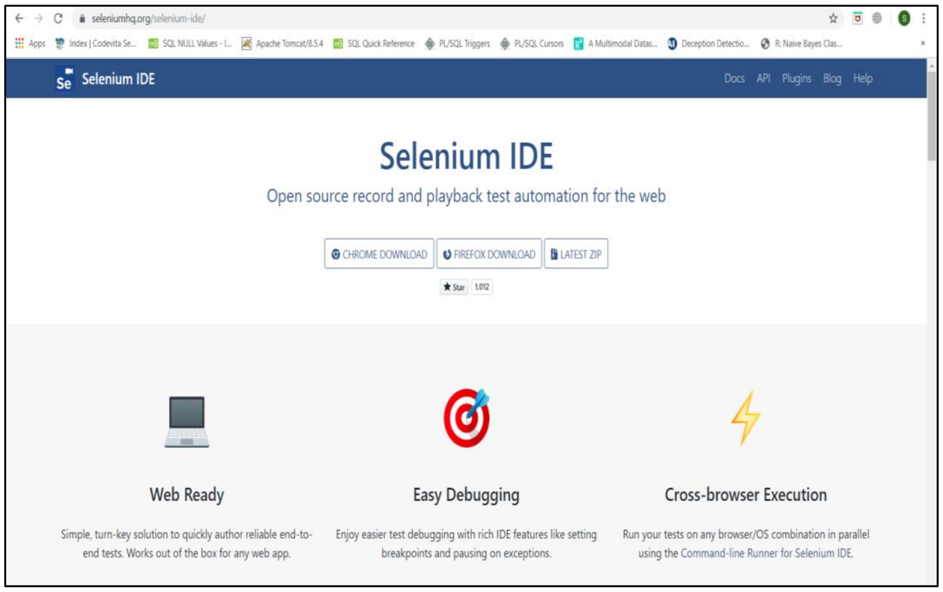
Process 2: Playing back – In this section, we execute the recorded script so as to verify and monitor its stability and success rate.

Process 3: Saving – Once we have recorded a stable script, we may want to save it for future runs and regressions.

Procedure:

Steps:

- Open Google Chrome → search for Selenium IDE.



Selenium IDE

Open source record and playback test automation for the web

Web Ready

Simple, turn-key solution to quickly author reliable end-to-end tests. Works out of the box for any web app.

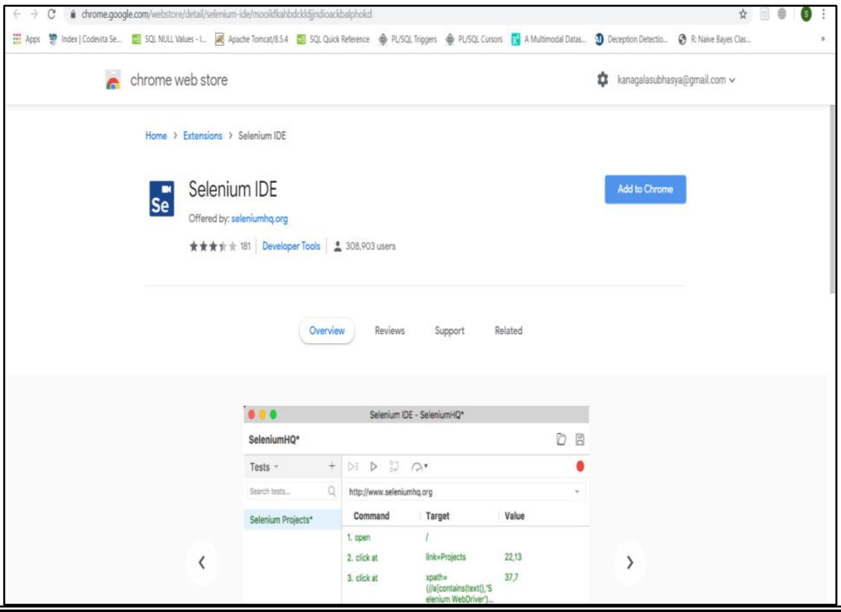
Easy Debugging

Enjoy easier test debugging with rich IDE features like setting breakpoints and pausing on exceptions.

Cross-browser Execution

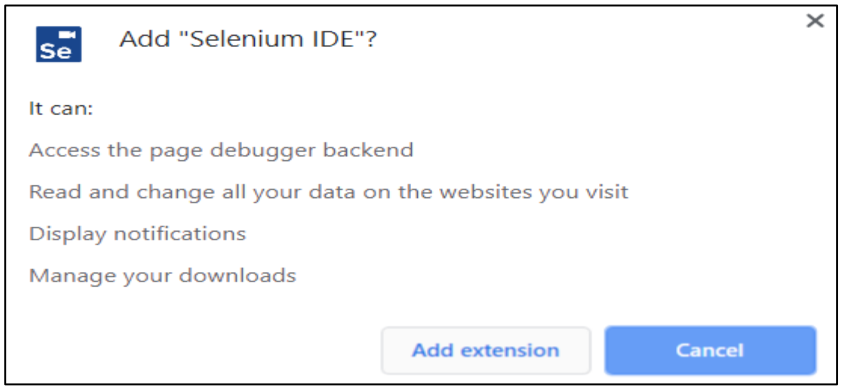
Run your tests on any browser/OS combination in parallel using the Command-line Runner for Selenium IDE.

- Click on CHROME DOWNLOAD.
- Click on Add to Chrome.


chrome web store
kanagalasubhasya@gmail.com
Home > Extensions > Selenium IDE
Selenium IDE
Offered by: seleniumhq.org
181 Developer Tools 308,903 users
Add to Chrome
Overview Reviews Support Related
Selenium IDE - SeleniumHQ*
SeleniumHQ*
Tests
Search tests...
Selenium Projects*
http://www.seleniumhq.org

Command	Target	Value
1. open	/	
2. click at	link=Projects	22,13
3. click at	xpath=(//a[contains(text(),'Selenium WebDriver')...	37,7

- Click on Add Extension.



Add "Selenium IDE"?

It can:

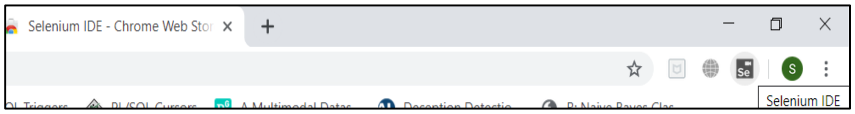
Access the page debugger backend

Read and change all your data on the websites you visit

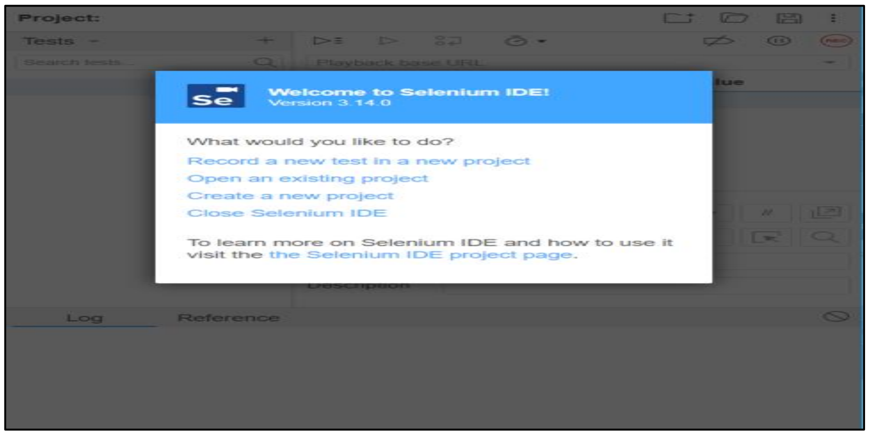
Display notifications

Manage your downloads

- Click on Selenium IDE Add-on.



- Click Record a new test in a new project.



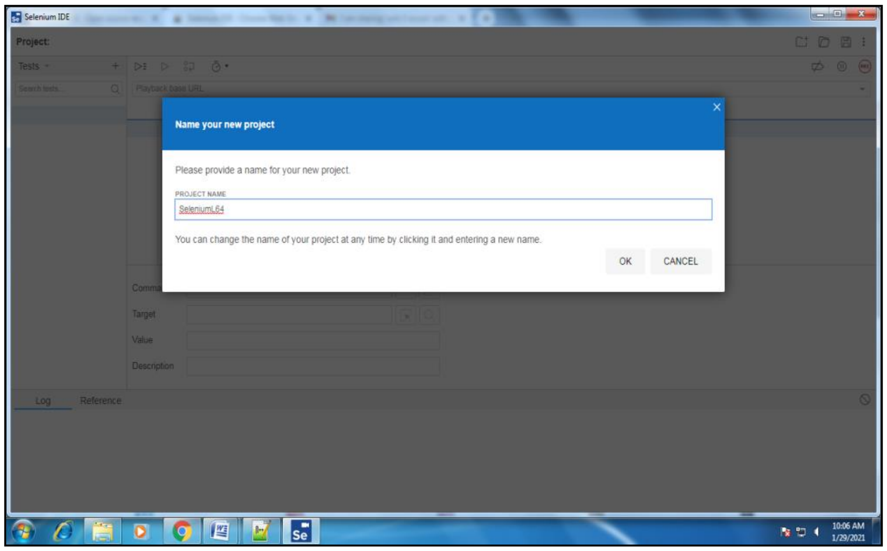
Welcome to Selenium IDE!
Version 3.14.0

What would you like to do?

Record a new test in a new project
Open an existing project
Create a new project
Close Selenium IDE

To learn more on Selenium IDE and how to use it visit the the Selenium IDE project page.

- Enter Project Name and click ok.



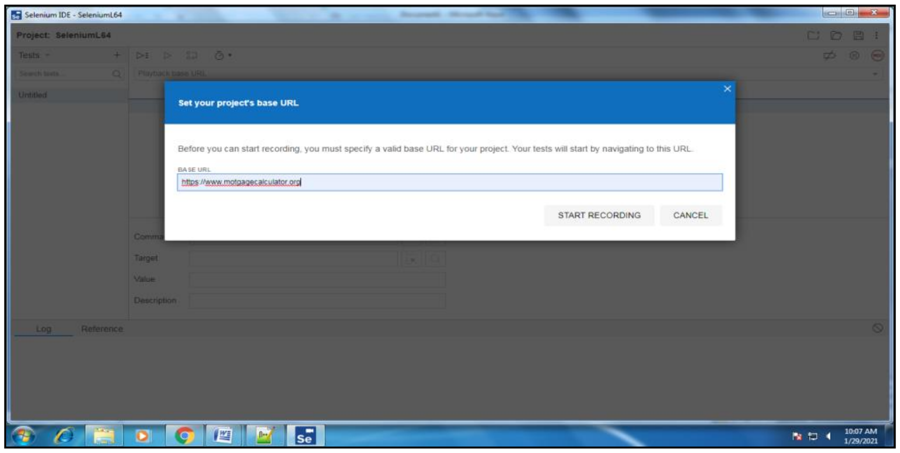
Name your new project

Please provide a name for your new project.

PROJECT NAME
SeleniumL64

You can change the name of your project at any time by clicking it and entering a new name.

- Enter Base URL for Mortgage Calculator and click START RECORDING.

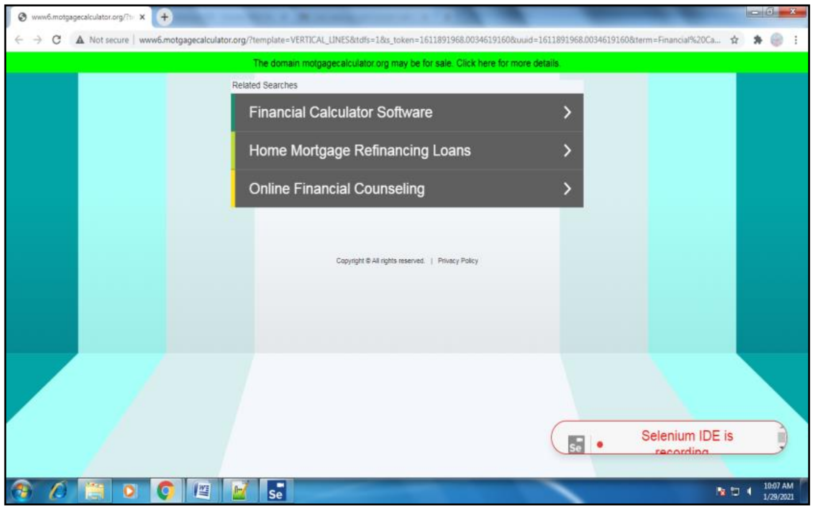


Set your project's base URL

Before you can start recording, you must specify a valid base URL for your project. Your tests will start by navigating to this URL.

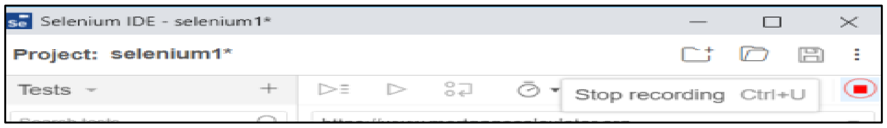
BASE URL: https://www.motgagecalculator.org

- It opens Mortgage Calculator home page. It will show the message Selenium IDE is Recording. Perform some action (like scrolling down the page, clicking on something etc) in that page for few seconds. This action will be recorded by Selenium IDE.

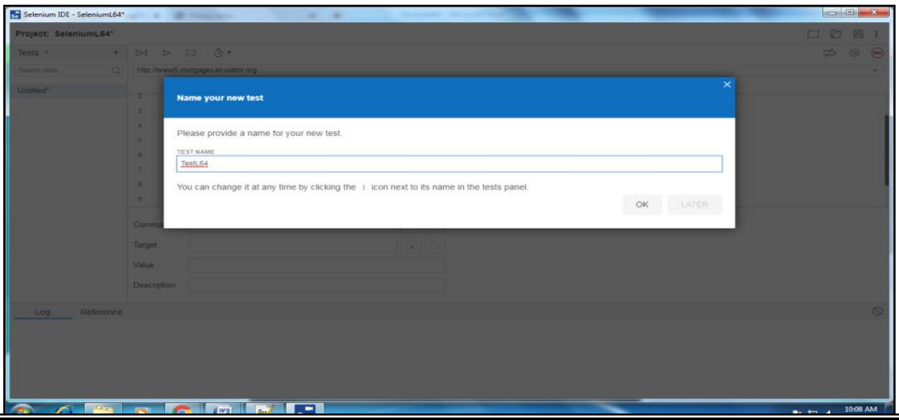

Related Searches
Financial Calculator Software
Home Mortgage Refinancing Loans
Online Financial Counseling
Selenium IDE is recording

The domain motgagecalculator.org may be for sale. Click here for more details.

- Now pause the recording by clicking on the pause symbol present at right side of selenium IDE



- Enter TEST NAME and click OK.



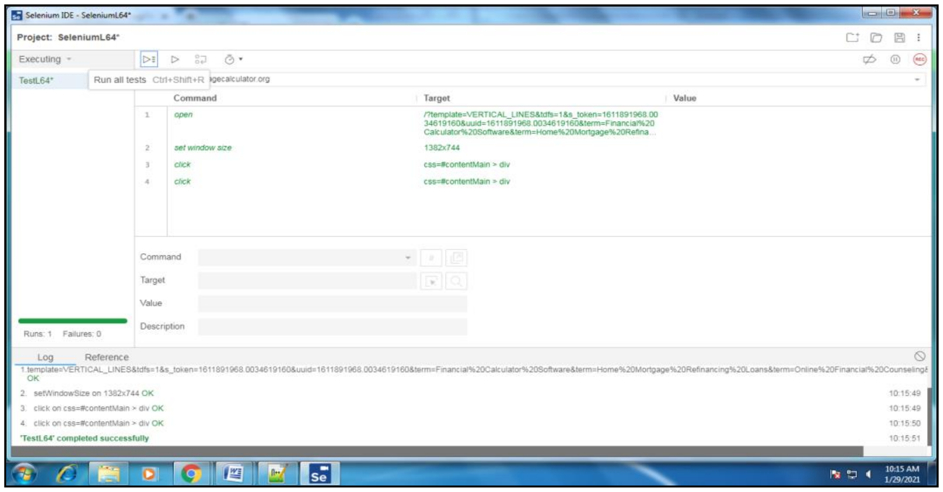
Name your new test

Please provide a name for your new test.

TEST NAME: TestL64

You can change it at any time by clicking the ⋮ icon next to its name in the tests panel.

- Click on Run all Test Cases. It will open Mortgage Calculator and shows the actions performed by you previously.



Selenium IDE - SeleniumL64*

Project: SeleniumL64*

Executing

TestL64*

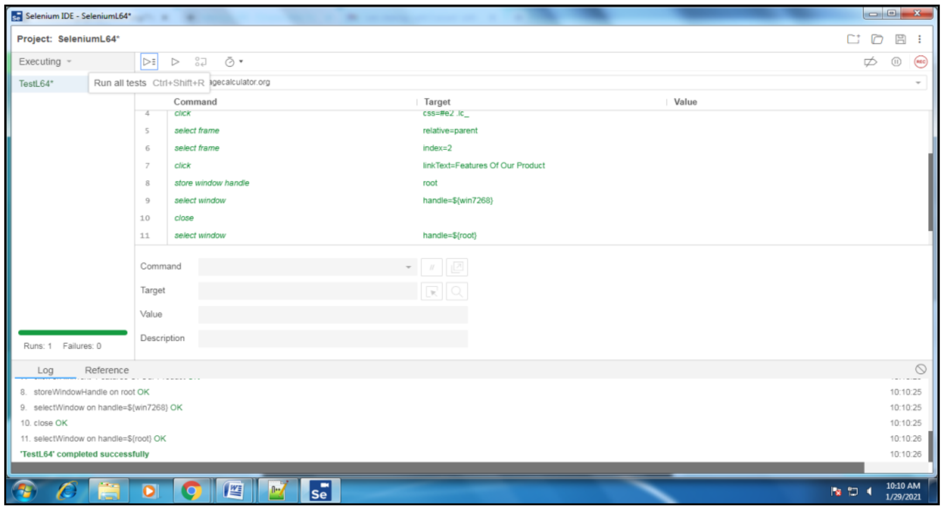
Run all tests Ctrl+Shift+R

	Command	Target	Value
1	open	/?template=VERTICAL_LINES&tdfs=1&s_token=1611891968.0034619160&uuid=1611891968.0034619160&term=Financial%20Calculator%20Software&term=Home%20Mortgage%20Refina...	
2	set window size	1382x744	
3	click	css=#contentMain > div	
4	click	css=#contentMain > div	

Runs: 1 Failures: 0

```
1.template=VERTICAL_LINES&tdfs=1&s_token=1611891968.0034619160&uuid=1611891968.0034619160&term=Financial%20Calculator%20Software&term=Home%20Mortgage%20Refinancing%20Loans&term=Online%20Financial%20Counseling&
  OK
2. setWindowSize on 1382x744 OK                                     10:15:49
3. click on css=#contentMain > div OK                               10:15:49
4. click on css=#contentMain > div OK                               10:15:50
'TestL64' completed successfully                                    10:15:51
```

- It shows message ‘TestL64’ completed successfully’.



Selenium IDE - SeleniumL64*

Project: SeleniumL64*

Executing

TestL64*

Run all tests Ctrl+Shift+R

	Command	Target	Value
4	click	css=#e2 .lc_	
5	select frame	relative=parent	
6	select frame	index=2	
7	click	linkText=Features Of Our Product	
8	store window handle	root	
9	select window	handle=${win7268}	
10	close		
11	select window	handle=${root}	

Runs: 1 Failures: 0

```
8. storeWindowHandle on root OK                                     10:10:25
9. selectWindow on handle=${win7268} OK                             10:10:25
10. close OK                                                        10:10:25
11. selectWindow on handle=${root} OK                               10:10:26
'TestL64' completed successfully                                    10:10:26
```

- Click save icon → give name to the file → click save button →It is saved with .side extension. Right click on that .side file →click edit with notepad →Copy the script present in it.This script shows what you have recorded. This script is shown as follows.

```
{
  "id": "2964990a-31e9-4573-87a9-4f9a7f584840",
  "version": "2.0",
  "name": "Jashuva",
  "url": "https://www.mortgagecalculator.org",
  "tests": [{
    "id": "11ccb133-e943-44da-8ada-9c6b8dfc3f8d",
    "name": "SeleniumTest",
    "commands": [{
      "id": "86ec6927-2570-43c4-aaa4-1f99c78c295d",
      "comment": "",
      "command": "open",
      "target": "/",
      "targets": [],
      "value": ""
    }, {
      "id": "33440f8c-7057-4ed9-8ee6-f80f1a03ff79",
      "comment": "",
      "command": "setWindowSize",
      "target": "683x728",
      "targets": [],
      "value": ""
    }, {
      "id": "54167e55-c018-4bb2-a98e-6c8c4d42ebad",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-group:nth-child(12)",
      "targets": [
        ["css=.highcharts-series-group:nth-child(12)", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "0ac15e25-b1ff-4830-943f-12cc28ff72c2",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-halo",
      "targets": [
        ["css=.highcharts-halo", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "2fef68cd-6f65-455c-b91d-0af8ff94cec4",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-1 > .highcharts-point-hover",
      "targets": [
        ["css=.highcharts-series-1 > .highcharts-point-hover", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "af804696-fa28-4481-a102-0223d64cfd89",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-2 > .highcharts-point-hover",
      "targets": [
        ["css=.highcharts-series-2 > .highcharts-point-hover", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "0533f86e-fd3f-462f-a2bb-691acd72ab34",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-2 > .highcharts-point-hover",
      "targets": [
        ["css=.highcharts-series-2 > .highcharts-point-hover", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "42723f55-6444-46de-9573-a2598028fc21",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-2 > .highcharts-point-hover",
      "targets": [
        ["css=.highcharts-series-2 > .highcharts-point-hover", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "2ed144bb-932f-4b69-8a33-0e1890990287",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-2 > .highcharts-point-hover",
      "targets": [
        ["css=.highcharts-series-2 > .highcharts-point-hover", "css:finder"]
      ],
      "value": ""
    }, {
      "id": "98710112-2579-4fb4-8e8b-5448ab80fbe0",
      "comment": "",
      "command": "click",
      "target": "css=.highcharts-series-2 > .highcharts-point-hover",
      "targets": [
        ["css=.highcharts-series-2 > .highcharts-point-hover", "css:finder"]
      ],
      "value": ""
    }]
  }],
  "suites": [{
    "id": "4fe1d31c-6951-4fe7-9053-1610d6498806",
    "name": "Default Suite",
    "persistSession": false,
    "parallel": false,
    "timeout": 300,
    "tests": ["11ccb133-e943-44da-8ada-9c6b8dfc3f8d"]
  }],
  "urls": ["https://www.mortgagecalculator.org/"],
  "plugins": []
}
```

Result: Thus, performing record play back using Selenium IDE Script has been performed successfully.

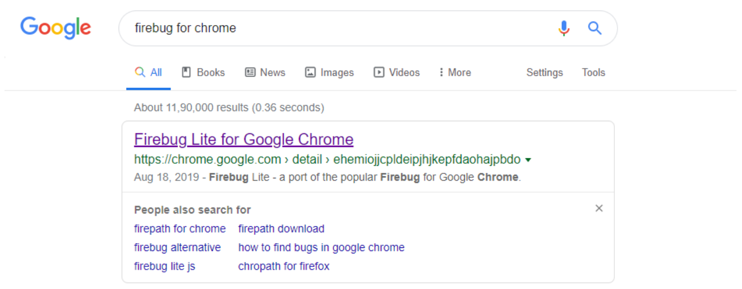
Task 10:

Aim: Identify Web elements using Id, Name and XPath using Selenium IDE.

Procedure:

Steps:

1. Search firebug for chrome → click firebug lite for chrome.



firebug for chrome

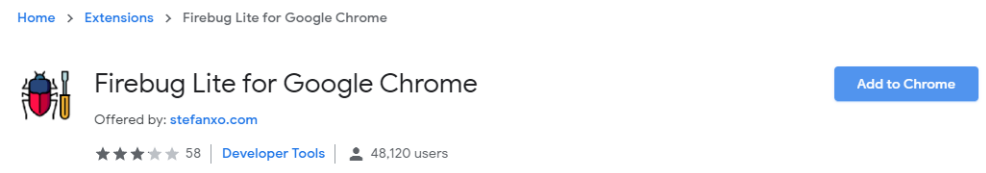
About 11,90,000 results (0.36 seconds)

Firebug Lite for Google Chrome
https://chrome.google.com › detail › ehemiojjcpldeipjhjkepfdaohajpbdo
Aug 18, 2019 - Firebug Lite - a port of the popular Firebug for Google Chrome.

People also search for

firepath for chrome, firepath download, firebug alternative, how to find bugs in google chrome, firebug lite js, chropath for firefox

2. Click add to chrome.



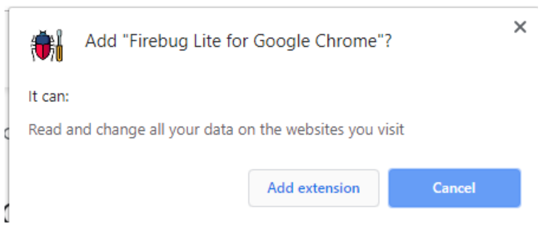
Home > Extensions > Firebug Lite for Google Chrome

Firebug Lite for Google Chrome

Offered by: stefanxo.com

58 | Developer Tools | 48,120 users

3. Click add extension.

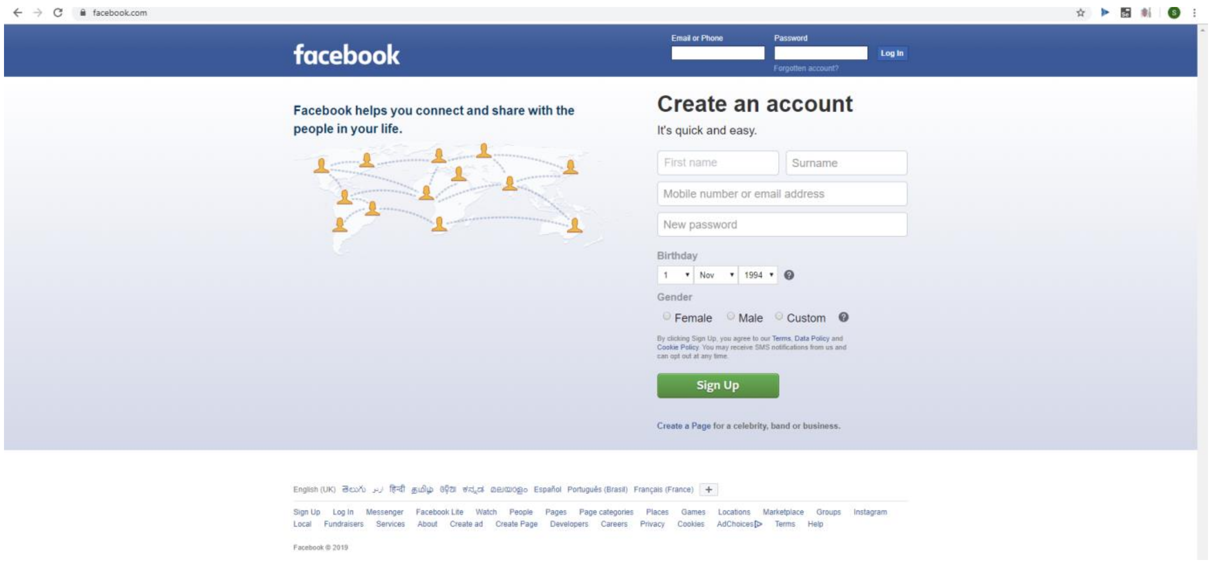


Add "Firebug Lite for Google Chrome"?

It can:

Read and change all your data on the websites you visit

4. Open facebook home page.



Facebook helps you connect and share with the people in your life.

Create an account

It's quick and easy.

First name | Surname | Mobile number or email address | New password

Birthday 1 Nov 1994

Gender Female Male Custom

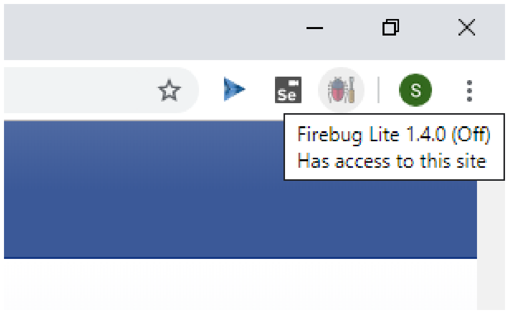
By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.

Sign Up

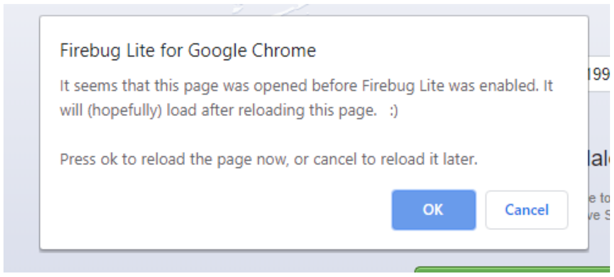
Create a Page for a celebrity, band or business.

Facebook © 2019

5. Click on firebug.


Firebug Lite 1.4.0 (Off)
Has access to this site

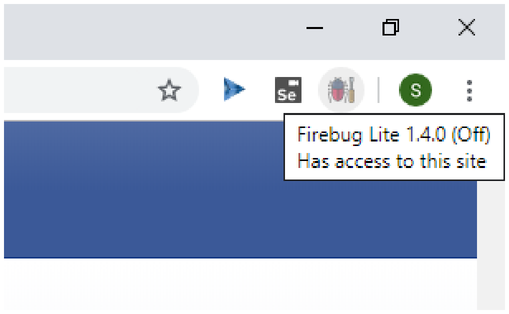
6. Click ok.

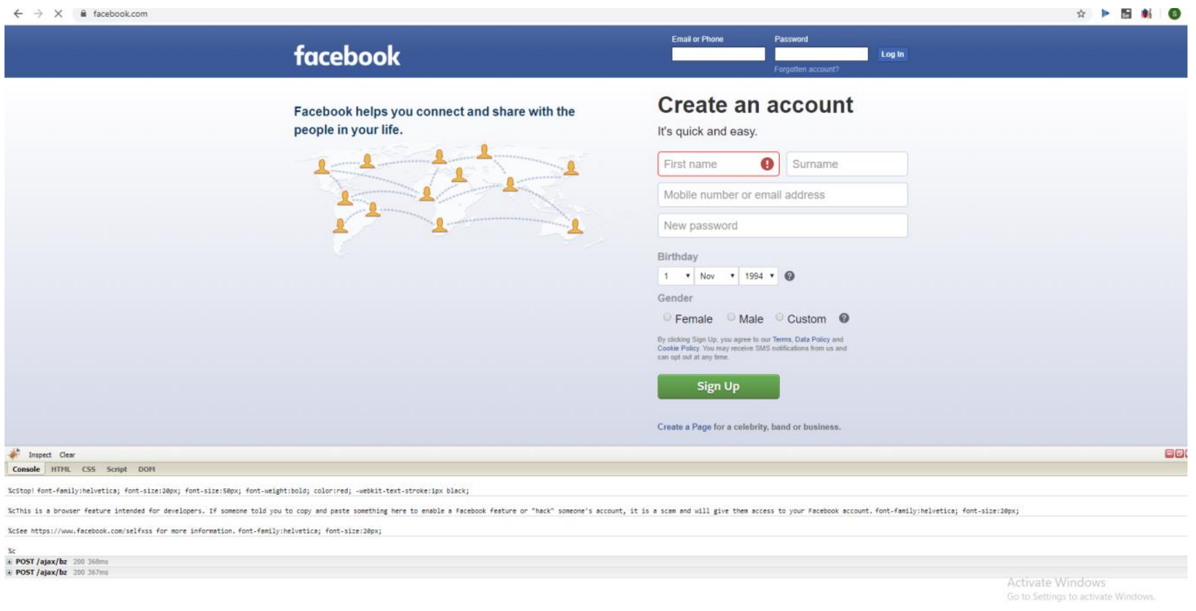

Firebug Lite for Google Chrome

It seems that this page was opened before Firebug Lite was enabled. It will (hopefully) load after reloading this page. :)

Press ok to reload the page now, or cancel to reload it later.

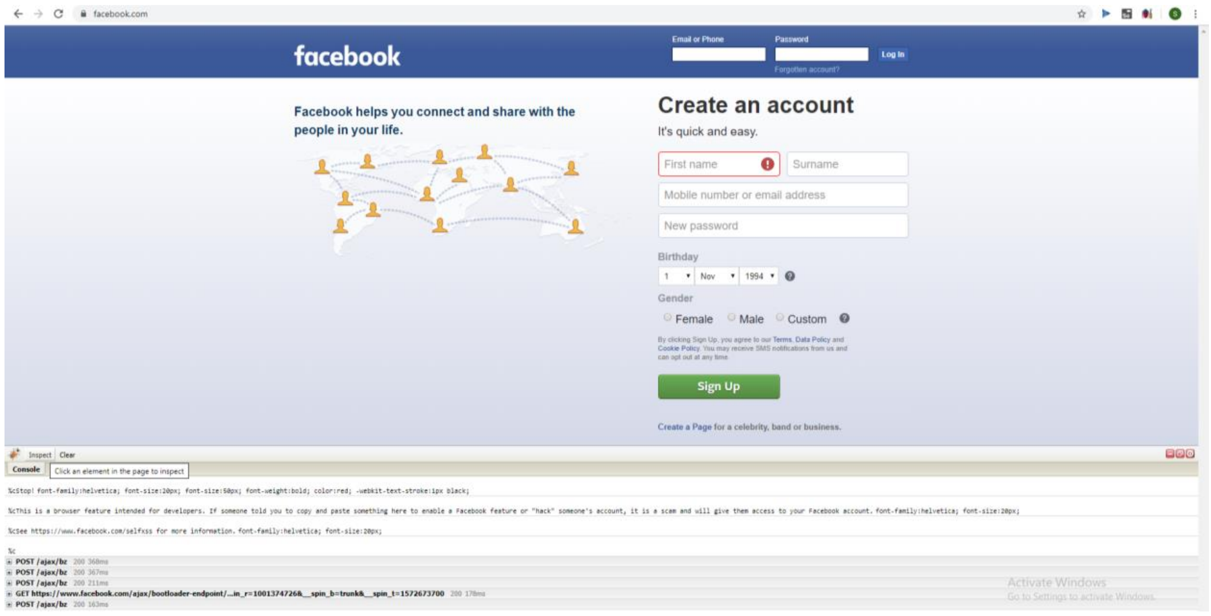
7. Click on fire bug again. It will open console below.


Firebug Lite 1.4.0 (Off)
Has access to this site



```
%cStop! font-family:helvetica; font-size:20px; font-size:50px; font-weight:bold; color:red; -webkit-text-stroke:1px black;

%cThis is a browser feature intended for developers. If someone told you to copy and paste something here to enable a Facebook feature or "hack" someone's account, it is a scam and will give them access to your Facebook account. font-family:helvetica; font-size:20px;

%cSee https://www.facebook.com/selfxss for more information. font-family:helvetica; font-size:20px;

%c
⊞ POST /ajax/bz  200 368ms
⊞ POST /ajax/bz  200 367ms
```

8. Click on inspect button.

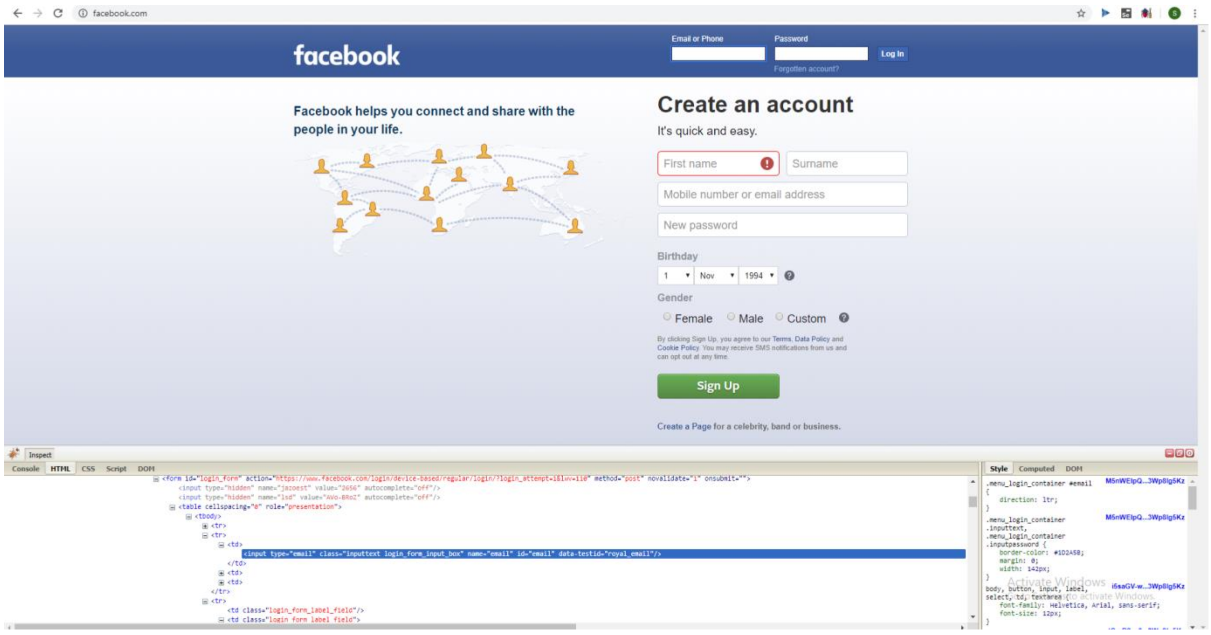


```
%cStop! font-family:helvetica; font-size:20px; font-size:50px; font-weight:bold; color:red; -webkit-text-stroke:1px black;

%cThis is a browser feature intended for developers. If someone told you to copy and paste something here to enable a Facebook feature or "hack" someone's account, it is a scam and will give them access to your Facebook account. font-family:helvetica; font-size:20px;

%cSee https://www.facebook.com/selfxss for more information. font-family:helvetica; font-size:20px;

%c
⊞ POST /ajax/bz  200 368ms
⊞ POST /ajax/bz  200 367ms
⊞ POST /ajax/bz  200 211ms
⊞ GET https://www.facebook.com/ajax/bootloader-endpoint/...in_r=1001374726&__spin_b=trunk&__spin_t=1572673700  200 178ms
⊞ POST /ajax/bz  200 163ms
```

Hover on the required element present on facebook login page, then we will get Class, Id corresponding to that element.

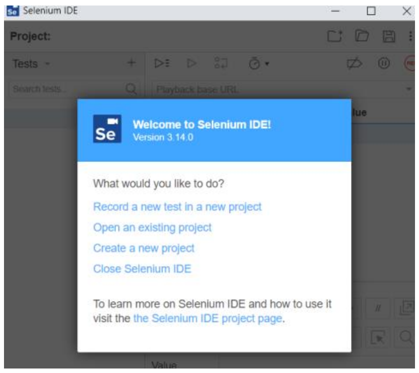
Identifying Web elements using Id using Selenium IDE:

i. Hover on Email or Phone text box field to get its details and copy its ID field from the code.



```
<form id="login_form" action="https://www.facebook.com/login/device-based/regular/login/?login_attempt=1&lwv=110" method="post" novalidate="1" onsubmit="">
    <input type="hidden" name="jazoest" value="2656" autocomplete="off"/>
    <input type="hidden" name="lsd" value="AVo-BRoZ" autocomplete="off"/>
  <table cellspacing="0" role="presentation">
    <tbody>
      <tr>
      <tr>
        <td>
          <input type="email" class="inputtext login_form_input_box" name="email" id="email" data-testid="royal_email"/>
        </td>
        <td>
        <td>
      </tr>
      <tr>
        <td class="login_form_label_field"/>
        <td class="login form label field">
```

ii. Click on selenium and click record a new test in a new project.



What would you like to do?

Record a new test in a new project

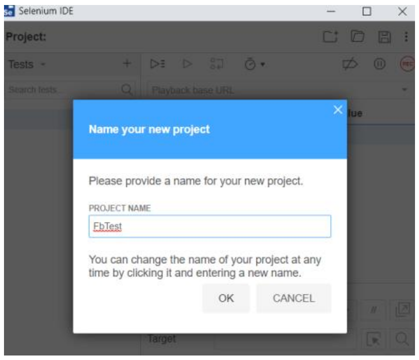
Open an existing project

Create a new project

Close Selenium IDE

To learn more on Selenium IDE and how to use it visit the the Selenium IDE project page.

iii. Name your project → Give Facebook home page URL and click Start Recording.



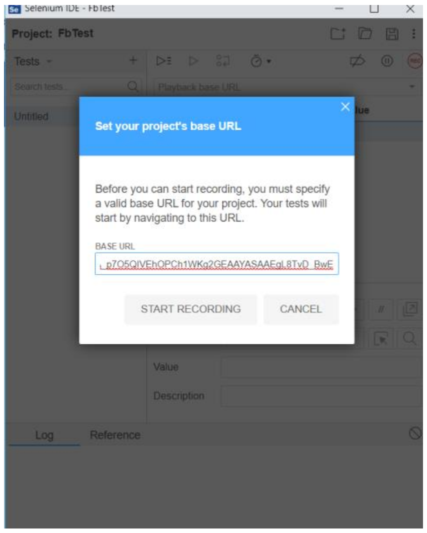
Name your new project

Please provide a name for your new project.

PROJECT NAME

FbTest

You can change the name of your project at any time by clicking it and entering a new name.



Selenium IDE - FbTest

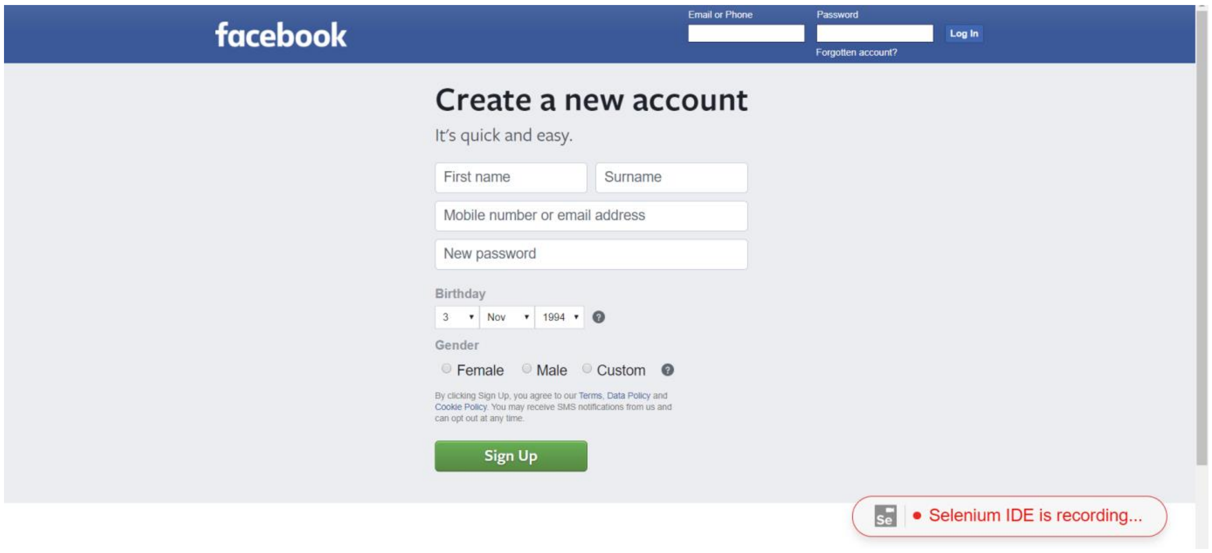
Project: FbTest

Set your project's base URL

Before you can start recording, you must specify a valid base URL for your project. Your tests will start by navigating to this URL.

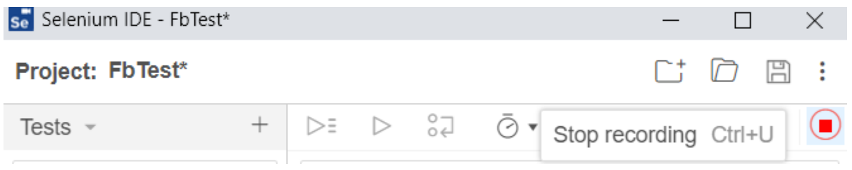
BASE URL: _p7O5QIVEhOPCh1WKg2GEAAYASAAEgL8TvD_BwE

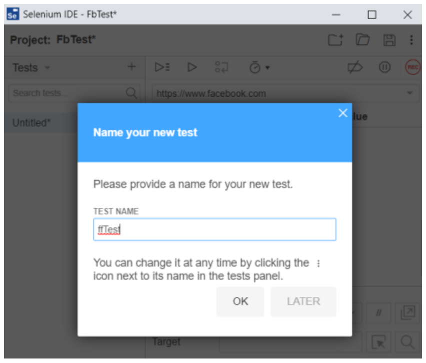
iv. Selenium opens the given url and starts recording the action you will be performing in that page.
(Note: Don't close that facebook page opened by selenium IDE)
Now minimize Facebook page.



facebook
Email or Phone
Password
Log In
Forgotten account?
Create a new account
It's quick and easy.
First name
Surname
Mobile number or email address
New password
Birthday
3
Nov
1994
Gender
Female
Male
Custom
By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.
Sign Up
Selenium IDE is recording...

v. Click stop recording → Give Test Name and click OK.





Selenium IDE - FbTest*

Project: FbTest*

Name your new test

Please provide a name for your new test.

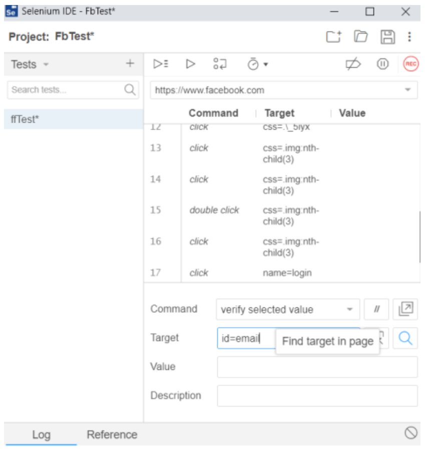
TEST NAME

ffTest

You can change it at any time by clicking the ⋮ icon next to its name in the tests panel.

OK LATER

vi. In command field, give **verify selected value** and in target give **id=email**.
(Note: email is the ID value for email field present in facebook login page which was copied before).



Selenium IDE - FbTest*

Project: FbTest*

https://www.facebook.com

ffTest*

	Command	Target	Value
12	click	css=._5lyx	
13	click	css=.img:nth-child(3)	
14	click	css=.img:nth-child(3)	
15	double click	css=.img:nth-child(3)	
16	click	css=.img:nth-child(3)	
17	click	name=login	

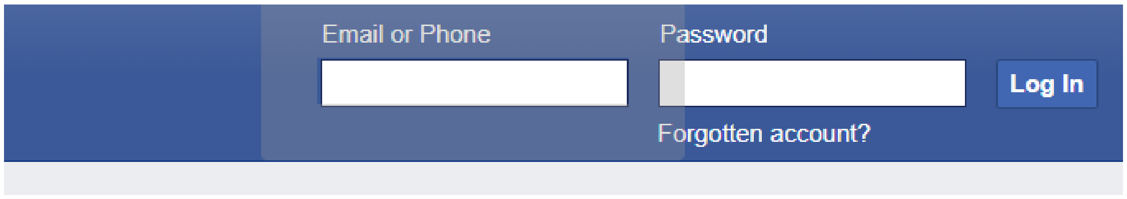
Command: verify selected value

Target: id=email

Value:

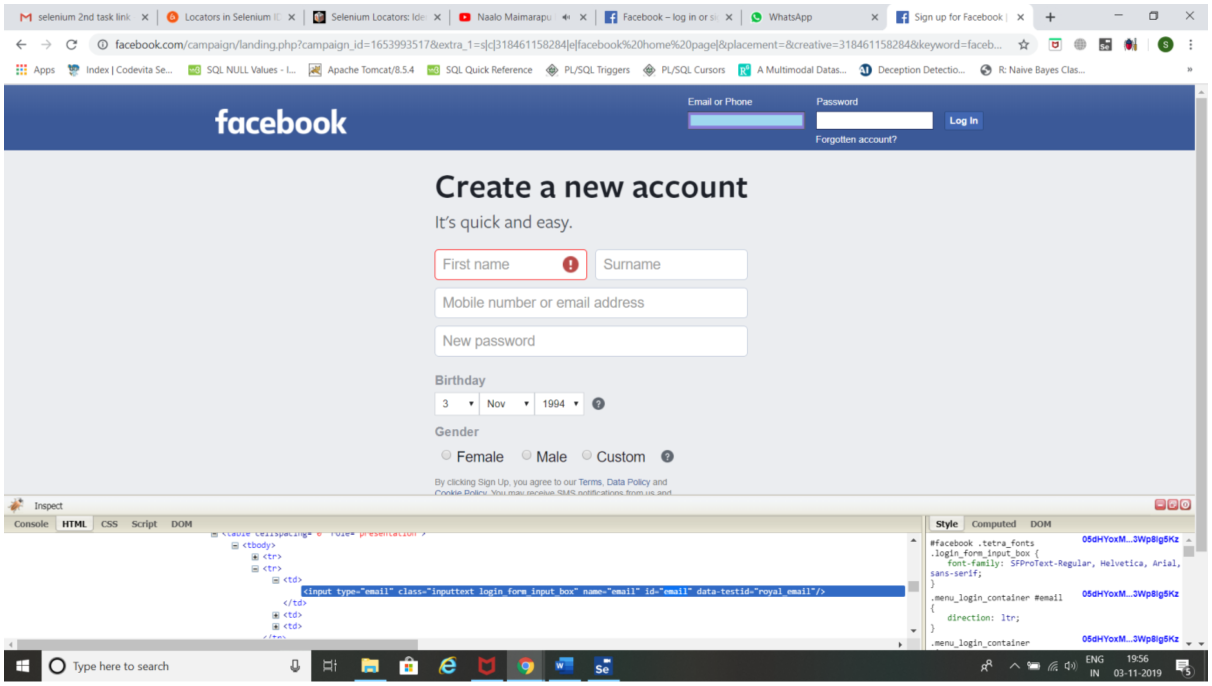
Description:

vii. Now click on search button beside target field. Now, email field will blink.



Identifying Web elements using Name using Selenium IDE:

i. Now inspect and copy **name** field value for Email or Phone field.

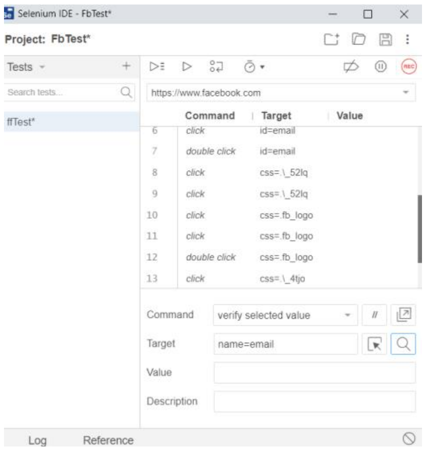


```
<tbody>
  <tr>
  <tr>
    <td>
      <input type="email" class="inputtext login_form_input_box" name="email" id="email" data-testid="royal_email"/>
    </td>
    <td>
    <td>
```

```
#facebook .tetra_fonts
.login_form_input_box {
    font-family: SFProText-Regular, Helvetica, Arial,
sans-serif;
}
.menu_login_container #email
{
    direction: ltr;
}
```

ii. In command field, give **verify selected value** and in target give **name=email.**

iii. (Note: **email** is the name value for email field present in facebook home page which was copied before).



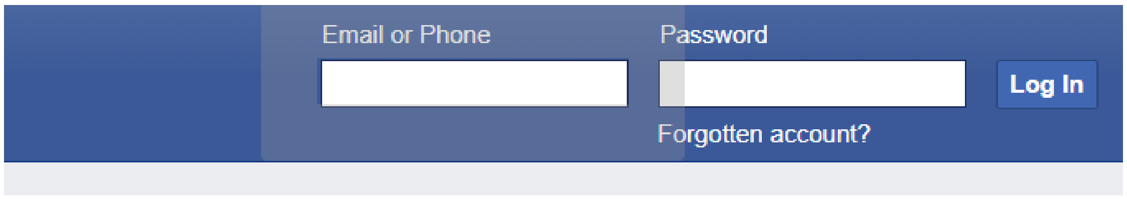
Project: FbTest*

https://www.facebook.com

	Command	Target	Value
6	click	id=email	
7	double click	id=email	
8	click	css=._52lq	
9	click	css=._52lq	
10	click	css=.fb_logo	
11	click	css=.fb_logo	
12	double click	css=.fb_logo	
13	click	css=._4tjo	

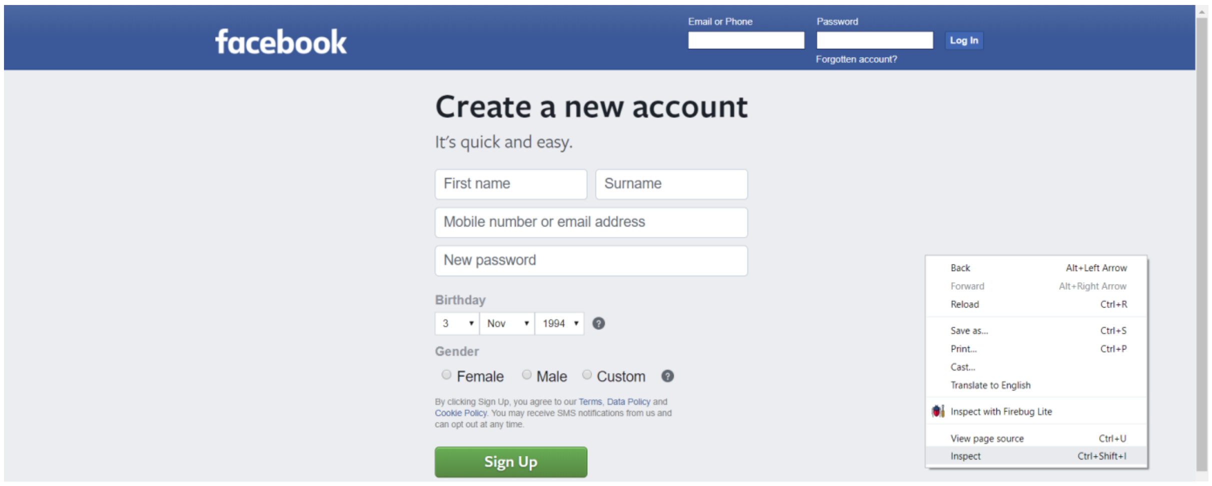
Command: verify selected value
Target: name=email
Value:
Description:

iv. Now click on search button beside target field. Now, email field will blink.

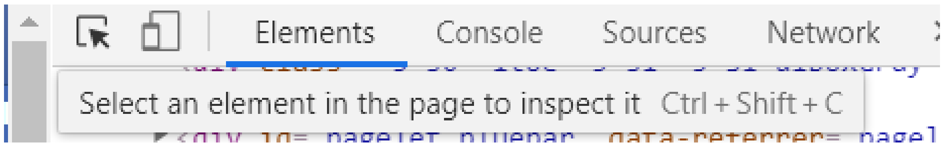


Identifying Web elements using XPATH using Selenium IDE:

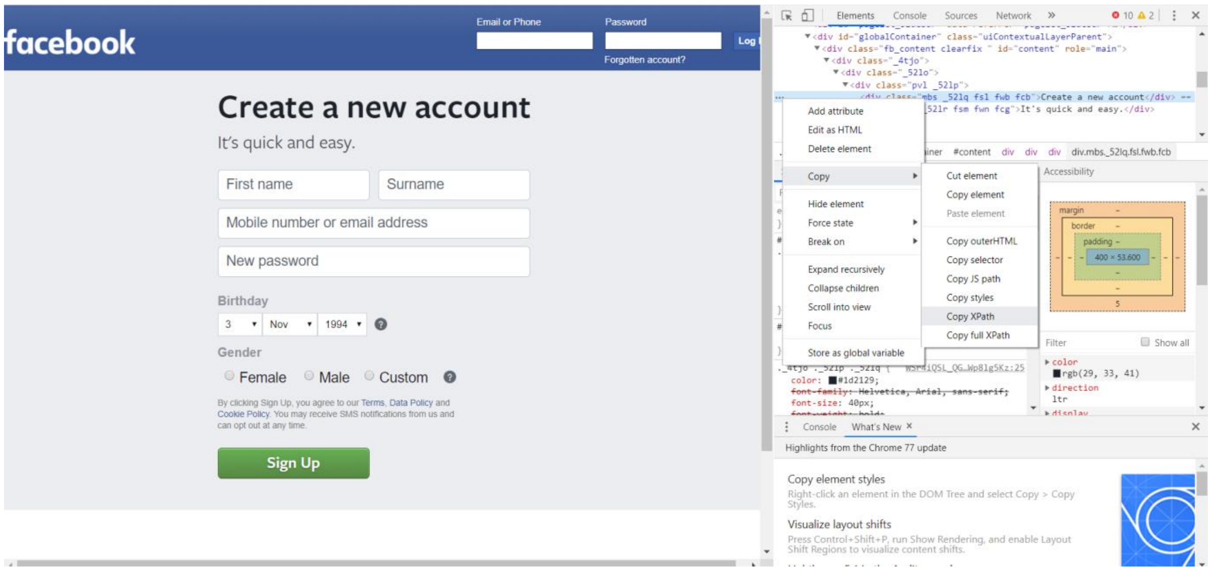
i. Open facebook home page in chrome →Right click → click inspect.



ii. Click inspect element → select **Create a new account** element to inspect.


Elements
Console
Sources
Network
Select an element in the page to inspect it Ctrl + Shift + C

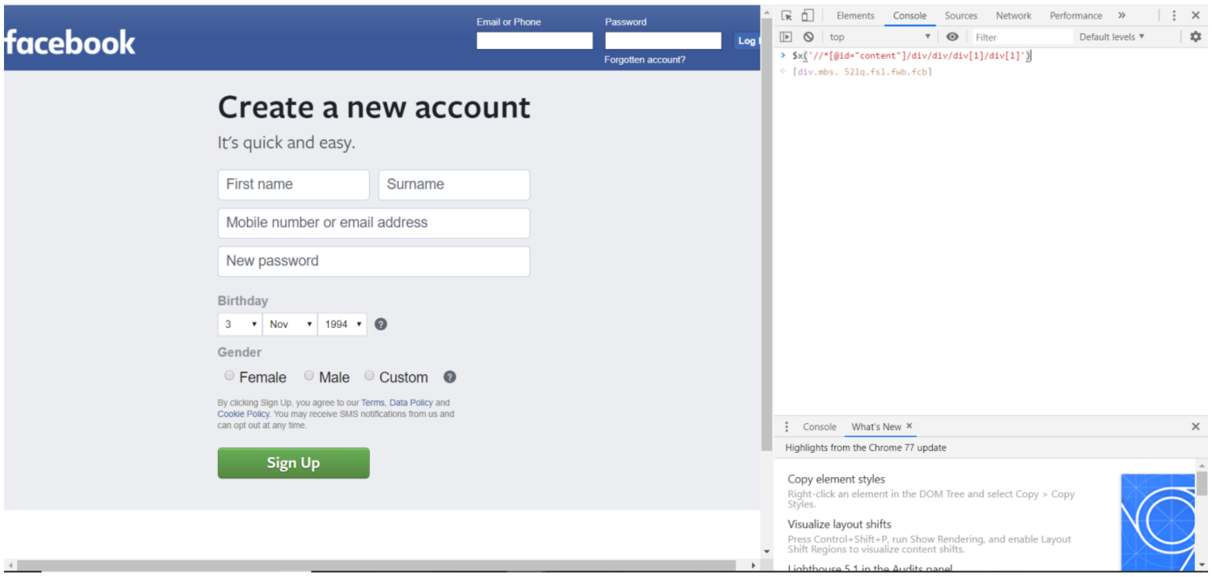
iii. Right click on the tag for **Create a new account** →copy → copy XPath.



iv. Now go to console tab → give following command.

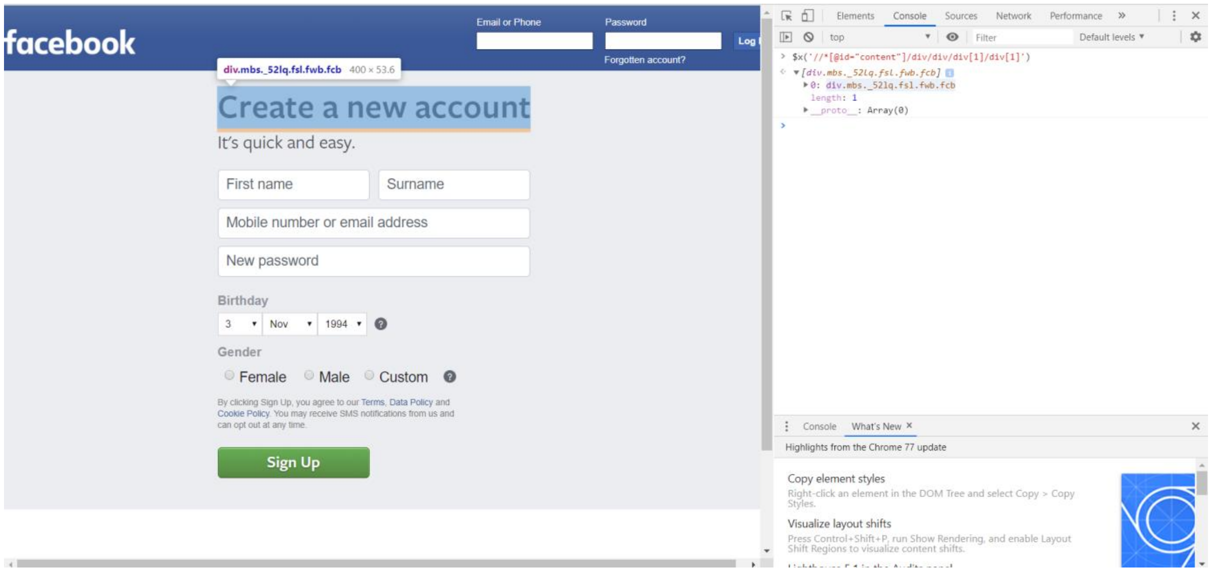
$x('//*[@id="content"]/div/div/div[1]/div[1]')

(Note: //*[@id="content"]/div/div/div[1]/div[1] is the XPath)


facebook
Email or Phone
Password
Forgotten account?
Create a new account
It's quick and easy.
First name
Surname
Mobile number or email address
New password
Birthday
3 Nov 1994
Gender
Female Male Custom
By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.
Sign Up
Elements Console Sources Network Performance
top
Filter
Default levels
Console What's New
Highlights from the Chrome 77 update
Copy element styles
Right-click an element in the DOM Tree and select Copy > Copy Styles.
Visualize layout shifts
Press Control+Shift+P, run Show Rendering, and enable Layout Shift Regions to visualize content shifts.

```
> $x('//*[@id="content"]/div/div/div[1]/div[1]')
< [div.mbs._52lq.fsl.fwb.fcb]
```

v. Now click the dropdown and hover on the command → **Create a new account** field gets selected.


facebook
Email or Phone
Password
Forgotten account?
div.mbs._52lq.fsl.fwb.fcb 400 × 53.6
Create a new account
It's quick and easy.
First name
Surname
Mobile number or email address
New password
Birthday
3 Nov 1994
Gender
Female Male Custom
By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.
Sign Up
Elements Console Sources Network Performance
top
Filter
Default levels
Console What's New
Highlights from the Chrome 77 update
Copy element styles
Right-click an element in the DOM Tree and select Copy > Copy Styles.
Visualize layout shifts
Press Control+Shift+P, run Show Rendering, and enable Layout Shift Regions to visualize content shifts.

```
> $x('//*[@id="content"]/div/div/div[1]/div[1]')
< ▾[div.mbs._52lq.fsl.fwb.fcb]
   ▸0: div.mbs._52lq.fsl.fwb.fcb
    length: 1
   ▸__proto__: Array(0)
>
```

Result:

Thus, identifying Web elements using Id, Name and XPath using Selenium IDE has been completed successfully.

Task 11:

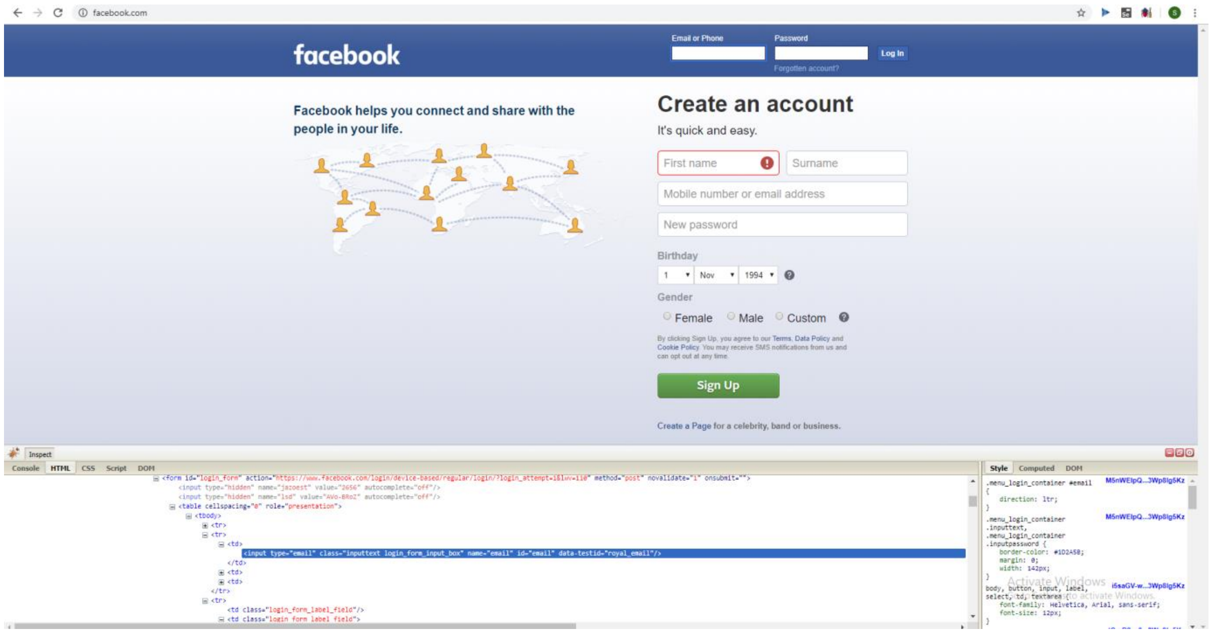
Aim: To use CSS selectors for identifying Web elements for selenium scripts using Selenium IDE

Procedure:

Steps:

Using Tag and ID:

i. Hover on Email or Phone text box field to get its details and copy its ID field from the code.

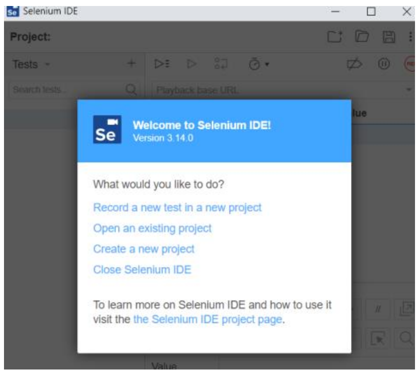


By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.

```
<form id="login_form" action="https://www.facebook.com/login/device-based/regular/login/?login_attempt=1&lwv=110" method="post" novalidate="1" onsubmit="">
    <input type="hidden" name="jazoest" value="2656" autocomplete="off"/>
    <input type="hidden" name="lsd" value="AVo-8RoZ" autocomplete="off"/>
  <table cellspacing="0" role="presentation">
    <tbody>
      <tr>
      <tr>
        <td>
          <input type="email" class="inputtext login_form_input_box" name="email" id="email" data-testid="royal_email"/>
        </td>
        <td>
        <td>
      </tr>
      <tr>
        <td class="login_form_label_field"/>
        <td class="login form label field">
```

```
.menu_login_container #email                M5nWElpQ...3Wp8Ig5Kz
{
    direction: ltr;
}
.menu_login_container                       M5nWElpQ...3Wp8Ig5Kz
.inputtext,
.menu_login_container
.inputpassword {
    border-color: #1D2A5B;
    margin: 0;
    width: 142px;
}
body, button, input, label,                 i5saGV-w...3Wp8Ig5Kz
select, td, textarea {
    font-family: Helvetica, Arial, sans-serif;
    font-size: 12px;
}
```

ii. Click on selenium and click record a new test in a new project.



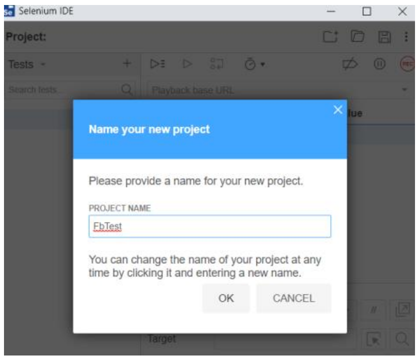
Welcome to Selenium IDE!
Version 3.14.0

What would you like to do?

Record a new test in a new project
Open an existing project
Create a new project
Close Selenium IDE

To learn more on Selenium IDE and how to use it visit the the Selenium IDE project page.

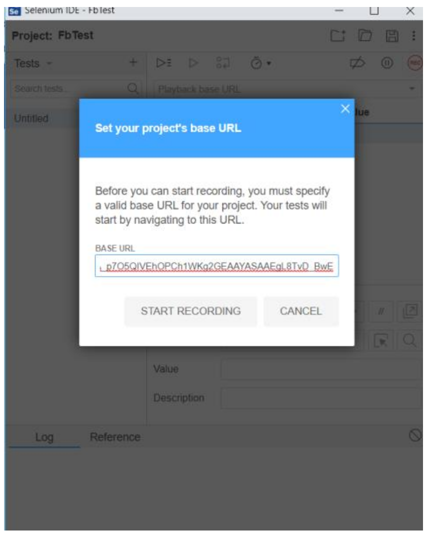
iii. Name your project → Give Facebook home page URL and click Start Recording.


Name your new project

Please provide a name for your new project.

PROJECT NAME: FbTest

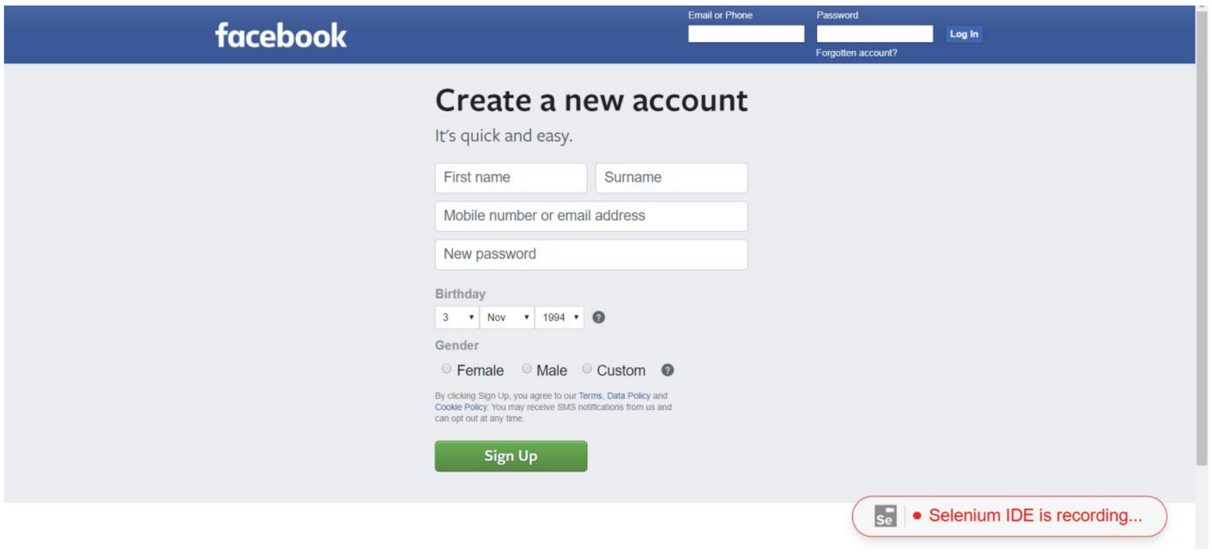
You can change the name of your project at any time by clicking it and entering a new name.


Set your project's base URL

Before you can start recording, you must specify a valid base URL for your project. Your tests will start by navigating to this URL.

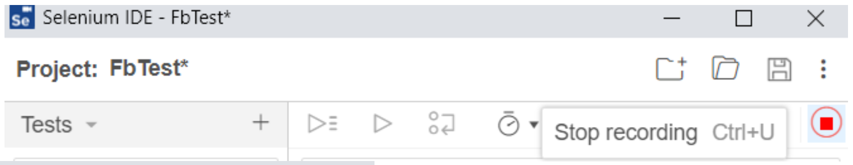
BASE URL: _p7O5QIVEhOPCh1WKg2GEAAYASAAEgL8TvD_BwE

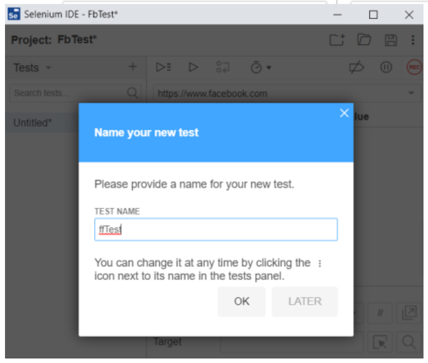
iv. Selenium opens the given url and starts recording the action you will be performing in that page.
(Note: Don't close that facebook page opened by selenium IDE)
Now minimize Facebook page.



facebook
Email or Phone
Password
Log In
Forgotten account?
Create a new account
It's quick and easy.
First name
Surname
Mobile number or email address
New password
Birthday
3
Nov
1994
Gender
Female
Male
Custom
By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.
Sign Up
Selenium IDE is recording...

v. Click stop recording → Give Test Name and click OK.




Selenium IDE - FbTest*

Project: FbTest*

https://www.facebook.com

Name your new test

Please provide a name for your new test.

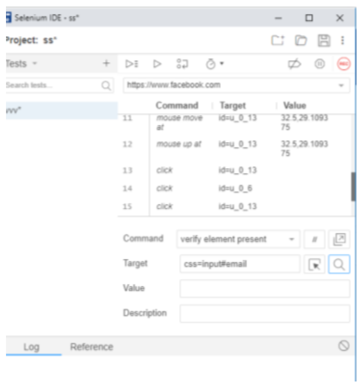
TEST NAME

fTest

You can change it at any time by clicking the ⋮ icon next to its name in the tests panel.

OK LATER

vi. In command field, give **verify element present** and in target give **css=input#email**.
(Note: **email** is the ID value for email field present in facebook login page which was copied before. And **input** is tag name).


Selenium IDE - ss*

Project: ss*

https://www.facebook.com

	Command	Target	Value
11	mouse move at	id=u_0_13	32.5,29.109375
12	mouse up at	id=u_0_13	32.5,29.109375
13	click	id=u_0_13	
14	click	id=u_0_6	
15	click	id=u_0_13	

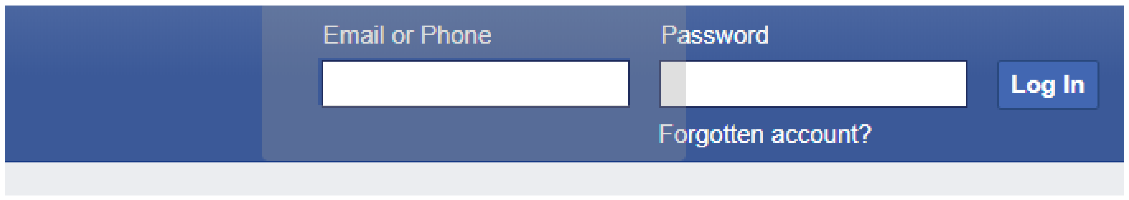
Command: verify element present

Target: css=input#email

Value:

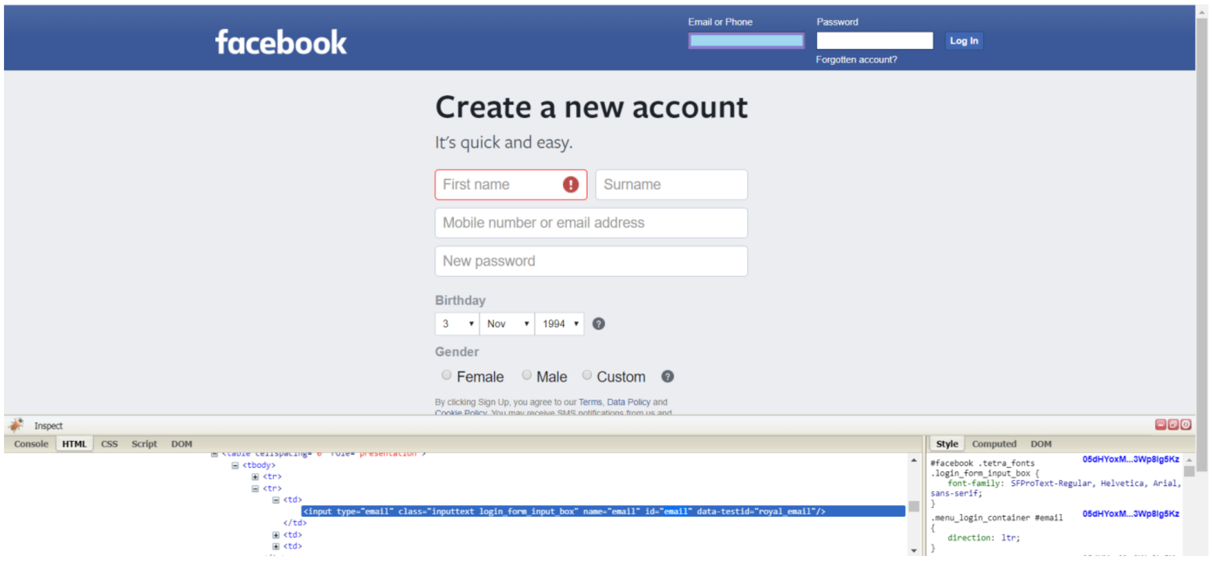
Description:

vii. Now click on search button beside target field. Now, email field will blink.



Using Tag and Class:

i. Now inspect and copy **class** field value for Email or Phone field.

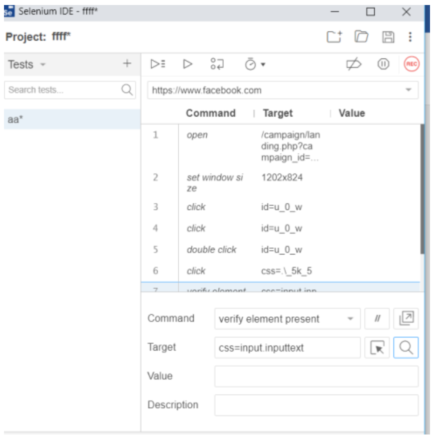


```
<tbody>
  <tr>
  <tr>
    <td>
      <input type="email" class="inputtext login_form_input_box" name="email" id="email" data-testid="royal_email"/>
    </td>
    <td>
    <td>
```

```
#facebook .tetra_fonts
.login_form_input_box {
   font-family: SFProText-Regular, Helvetica, Arial,
sans-serif;
}
.menu_login_container #email
{
   direction: ltr;
}
```

i. In command field, give **verify element present** and in target give **css=input.inputtext.**

ii. (Note: **inputtext** is the class value for email field present in facebook home page which was copied before. And **input** is the tag name).

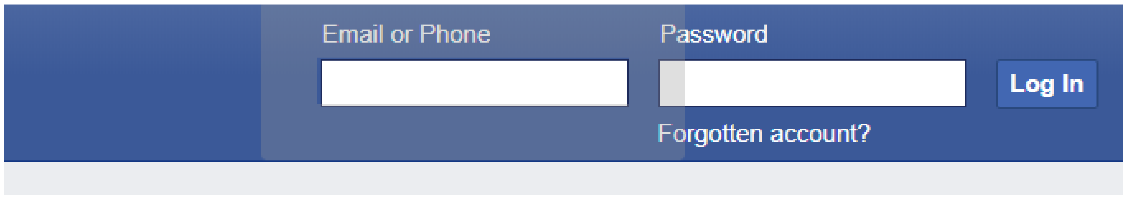


https://www.facebook.com

	Command	Target	Value
1	open	/campaign/landing.php?campaign_id=...	
2	set window size	1202x824	
3	click	id=u_0_w	
4	click	id=u_0_w	
5	double click	id=u_0_w	
6	click	css=._5k_5	

Command: verify element present
Target: css=input.inputtext
Value:
Description:

iii. Now click on search button beside target field. Now, email field will blink.



Result:

Thus, using CSS selectors for identifying Web elements for selenium scripts using Selenium IDE has been completed.