**TDD with TestNG**

**TestPopulationSearch.java**

package tdddemo;

import org.testng.Assert;

import org.testng.annotations.Test;

public class TestPopulationSearch {

@Test

public void findpopulation()

{

String city = "Mumbai";

int ExpectedPopulation = 2000000;

PopulationSearch ps = new PopulationSearch();

// number of people in the city

int count = ps.getPopulation(city);

System.out.println(count);

Assert.assertEquals(count, ExpectedPopulation);

}

@Test

public void findpopulationEmptyInput()

{

try {

String city = "";

int ExpectedPopulation = 0;

PopulationSearch ps = new PopulationSearch();

// number of people in the city

int count = ps.getPopulation(city);

}

catch(NullPointerException e)

{

System.out.println("City name cannot be empty");

}

}

@Test

public void findpopulationInvalidInput()

{

try {

String city = "Hyderabad";

int ExpectedPopulation = 700000;

PopulationSearch ps = new PopulationSearch();

// number of people in the city

int count = ps.getPopulation(city);

}

catch(NullPointerException e1)

{

System.out.println("City name doesnot exisit in the list");

}

}

}

**PopulationSearch.java**

package tdddemo;

import java.util.HashMap;

import java.util.Map;

public class PopulationSearch {

private Map<String, Integer> getpopulationdata() {

Map<String, Integer> populationMap = new HashMap<>();

populationMap.put("Banglore", 1000000);

populationMap.put("NewDelhi", 25000000);

populationMap.put("Mumbai", 2000000);

populationMap.put("Pune", 500000);

return populationMap;

}

public int getPopulation(String city) {

Map<String, Integer> populationMap = null ;

int count =0;

if(city.isEmpty())

{

throw new NullPointerException("City name cannot be empty");

}

populationMap = getpopulationdata();

if(!populationMap.containsKey(city))

{

throw new NullPointerException("City name doesnot exist");

}

else {

count = populationMap.get(city);

}

return count;

}

}