

SOFTWARE ENGINEERING (503074) (WEEK 09)

UNIT TESTING by P.T.K.Trung

EXERCISES

Using pre-supplied source code ([UnitTestExercise.zip](#)), create unit tests project to test the functions in the **StudentManager** class.

1. The full test case is required based on the description of the methods.
2. Make a list that indicates the results of running each test case: success or failure.
3. Correct StudentManager's code so that the test cases run properly.

HOMEWORK GUIDE

Download project [UnitTestExercise.zip](#) on classroom, unpack and do directly inside this project. In the project there are two classes **Student.cs** and **StudentManager.cs**, where **StudentManager.cs** has methods to manage a list of students. Each method comes with a description of the function requirement in the comments section.

```
/* - Add a student to the list (Thêm một sinh viên vào danh sách)
 * - Only added when the student whose code does not exist in the list (Chỉ thêm khi sinh viên có
 * - If the input parameter is null, throw an exception NullReferenceException (Nếu tham số nhận vào là n
 * - If the addition is successful, the number of students increases by 1 and the method returns true (Nếu
 * - If add fails, the method returns false (Nếu thêm không thành công thì phương thức trả về
 */
0 references
public bool addStudent(Student s)
{
    foreach (Student x in list)
    {
        if (x.ID == s.ID)
        {
            return true;
        }
    }

    list.Add(s);
    return true;
}
```

In there (comments on StudentManager.cs):

- The comments section is a description of exactly what the method needs to conduct.
- The code is a description-based reality, but may not be 100% as required.

Your mission is:

- Create a Unit Test project with C# (refer to class exercise example “BasicMath”)
- Based on the description in the comment to write the testcase to test the methods.
- Each method may require multiple testcases to test.