**3rd Software Engineering Homework**

1. Design one unit test in order to automatically test the correctness of the **functions/classes** in your software. Note that you need to write code to implement the unit test.

The table below is an example of unit testing for Integer Adder, which only supports the add operation of integers.

|  |  |
| --- | --- |
| **Input(string)** | **Output(string)** |
| 11 23 | 34 |
| 15 -85 | -70 |
| -13 -46 | -59 |
| -47 32 | -15 |
| 0 0 | 0 |
| 2147483650 1 | int\_overflow |
| -2147483650 -1 | int\_overflow |
| 2147483647 2 | int\_overflow |
| -2147483648 -2 | int\_overflow |
| & 8 | illegal\_character |
| 12 \* | illegal\_character |
| b % | illegal\_character |
| 1 4.5 | illegal\_number |
| 1.3 5 | illegal\_number |
| 51.3 3.5 | illegal\_number |

Also, a concrete file of cpp source code for this unit test is given in the attachment, which can successfully pass the first five tests and fail the sixth one. Hopefully, this is a good example explaining what is a specific unit test.

本次课程软件设计采用的是安卓开发，因此，进行两种类型的测试，包括单元测试和UI测试。

UI测试：对新增加的账本是否正确显示

单元测试：模拟在输入数据时作的加减法然后存于数据库中，通过读出数据库中的内容测试是否成功地进行单元测试，或者测试读取数据库中的内容是否正确。