

**IMC home assignment**

**General test requirements and instructions**

Thank you in advance for taking the time and efforts to complete below assignments. Once you have completed the assignments, please return your solutions in a ZIP- or RAR-file. Your solutions will then be reviewed by our team of Engineers.

General test requirements and instructions:

* You have 72 hours to complete the test;
* Make sure we can compile and run your code;
* Please just send the code, not a Visual Studio project or something similar.

We require you to apply the following object oriented programming paradigms to your solution:

* Good encapsulation
* Separation of concerns
* Polymorphism
* Testable design

If you are unfamiliar with the above principles, we recommend you look them up. In addition, your program must be well-behaving (eg. no memory leaks) and you must provide a simple unit test.

**Problem**

Paper-Rock-Scissors is a game for two players. Each player simultaneously opens his/her hand to display a symbol:

* Fist equals rock
* Open hand equals paper
* Showing the index and middle finger equals scissors

The winner is determined by the following schema:

* Paper beats (wraps) rock
* Rock beats (blunts) scissors
* Scissors beats (cuts) paper

Write a program that plays Paper-Rock-Scissors between the computer and a real player. You should be able to play the game n times before the program exits.

**\*\*Please note that the contents of the test documents are confidential, and are proprietary to IMC. Do not share or forward them to anyone\*\***