soft**serve**

Sample of assignments to enter .Net Division

Version 2.2

For

***SoftServe IT Academy***

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**Revision History**

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| **Date** | **Version** | **Description** | **Author** |
| /05/2012 | 0.1 | Initial version | Yaroslav Harasym |
| /05/2012 | 0.1 | Initial version | Lesya Klakovych |
| 25/05/2012 | 0.2 | Revision | Mariya Mudra |
| 3/21/2014 | 2.0 | New approach – entry test is a language based | Andriy Pereymybida |
| 23/07/2018 | 2.1 | Changed time for tests | Lesya Klakovych |
| 19/11/2018 | 2.2 | Deleting time limits | Lesya Klakovych |

# 1 OBJECTIVE

This document has been prepared to make the process of entering SoftServe IT Academy, namely its OOP Division easier and more understandable for the candidates. Here there are described the requirements to the level of the candidates’ knowledge, there are given the test samples, there is recommended an online-test, a test to determine the level of knowledge and there is given the reference list.

# 2 SAMPLES OF THE ENTRANCE TESTS

**GENERAL**

The entrance test consists of two parts:

1. The first part is a set of multiple-choice tests (it is necessary to choose one or more variants from among the offered). The results of this test are checked automatically and are known right after passing the test. A test contains 10 questions. This part includes the topics in C# Core.
2. To the second part there are admitted the candidates that successfully passed the first part. This part provides the answer to the open-ended questions (it is necessary to enter the code to the relevant field, make a comment, etc.). It is forbidden to use the development environment. This part of test is checked manually and its results are available after verification.
3. A language that is used in the entrance testing. All the proposed tasks will be in English. The second part includes your verbal response together with a program code. To comment the open-ended questions it is possible to use any accessible language.

**SAMPLES OF TASKS:**

Samples of the tests are available if to follow the below-mentioned links:

http://www.pskills.org/csharp.jsp

Sample of assessments for the second part:

Create next classes: Cat, Dog and Petshop.

Types Cat and Dog have fields Name and Breed and method Introduce() which prints text “I’m (Name) of (Breed). I’m a cat (or dog)”.

The class Petshop collects in its container different pets.

We may add new pet to container by method AddPet() and we may display information about all pets by method IntroduceAll().

Which hierarchy of classes is the best solution of this problem?

Write short code to demonstrate your solution. Your code should include class (interface) aggregation, inheritance, should use .NET BCL collections or generics, should implement exception handling.

# 3 REFERENCES

* Andrew Troelsen. Pro C# 5.0 and the .NET 4.5 Framework.
* Jeffrey Richter. CLR via C#. (Fourth edition).
* Herbert Schildt. C# 4.0. The Complete Reference. – Publishing house: «Williams». – 2011