

Final Test of Principi di Linguaggi di Programmazione - Modulo II

May 20, 2013

Premise

- The FE of this module consists of 10 open answer questions to be answered in 2 hours.
- Questions are on the arguments discussed in the course and strongly related to the way in which they are treated.
- The answer to each question can be easily deduced from the contents of the recommended material of the course.
- The following slides contain 5 distinct questions that should furnish an idea of the possible questions.

Exercise 1. Write the semantic functions of the each of the thee phases of the parameter passing by reference

Exercise 2. List the different kinds of values that can be present in a language. For each of then give a definition and an example of use.

Exercise 3. Rephrase in a Java program the code of the language FJ introduced in the course. Justify each change that you do

```
classes class A extends Object{
    int x = this.y.x + 2;
    C y = new C();
    cstr(C u) {y=u;};
    int add(int u){this.x=2*this.x+u;};}
class B extends A{
    int x = 0;
    cstr() {x=10;};
    int add(int u){this.x=u;};}
class C extends Object{int x = 7; cstr(){};};}
end
A z = new B(new C());
int w = z.super.x;
```

Exercise 4. What is a Fully Abstract Abstraction? Give a definition, discuss advantages, and show an example of its use

Exercise 5. Show the definition of the type record: Give an abstract syntax, the semantics functions and comment the role of the environment in the values of the data type.