

CS213: Object Oriented Programming



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FACULTY OF COMPUTERS AND ARTIFICIAL INTELLIGENCE, CAIRO UNIVERSITY

CS213: Programming II

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First Semester

Assignment 2 – Task4

Course Instructors:

Dr. Mohammad El-Ramly.

Work break-down table:

Salma Gamal Kamel.	2022 1073	-report writing.
Malak Ahmed El Tabah.	2022 1157	-code modification and clean up.
Nadra Mahmoud Saad.	2022 0355	-selection and install .

Our experience: it was hard to setup PVS on my laptop so we have searched and found

We used(cpp check) and it was easy to use it .

Simulator program:

The warnings were:

- in line 58

Class 'CPU' has a constructor with 1 argument that is not explicit. Such, so called

"Converting constructors", should in general be explicit for type safety reasons as that

Prevents unintended implicit conversions.

- In line 98

The scope of the variable 'address' can be reduced. Warning: Be careful when fixing this

Message, especially when there are inner loops

How we fix it:

- We add word (execute) before the constructor and that helps us when we create a CPU

Object, we would need to explicitly use the constructor to perform the conversion.

- We put (int address=0) inside the while loop because we only use it in the loop

The Bigreal programm

The warnings:

1. Line 606:

Comparison of a boolean expression with an integer other than 0 or 1.

2. Line 153/154:

When an object of a class is created, the constructors of all member variables are called

Consecutively in the order the variables are declared, even if you don't explicitly write

Them to the initialization list. You could avoid assigning 'integer' a value by passing the

Value to the constructor in the initialization list.

3. Line 95 /151 / 233 :

Condition 'realNumber[0]!='+' is always true.

4. Line 310/ 465: Local variable 'size' shadows outer function.
5. Line 173: Variable 'object' is assigned a value that is never used.

How we solve it:

1. We edit the condition.
2. We make the function take automatically the parameters in an easier way to improve the Performance.
3. We edit the condition.
4. We rename the variable (size)
5. We delete the variable (object)