



Faculty of Computers and Artificial Intelligence Cairo University

Object Oriented Programming Course (CS213) Under Supervision Eng. Rana Abdelkader

Group: S21

Assignment 2 – Task 3 + Task 4

Done By:

| Name | ID | Classes, Opcodes |
|-----------------------|----------|--|
| Ghassan Tarek Elgendy | 20220239 | Opcode(3), Class(IR, Instructions, Machine) |
| Rawan Ehab Ammar | 20220331 | Opcode(4, 5, 6), Class(Counter, Memory, Machine) |
| Jana Mohamed Ramadan | 20220470 | Opcode(B, 1, 2), Class(Registry, Memory) |

Task 4: Code analysis

1. report of the experience

It greatly enhanced the overall code quality, improved code reliability it was hard to use at first glance but once we tried it in the BigReal task things got easier.

2.A-In task 2 (BigReal):

| Code | Message | File | Line |
|-------|---|-------------|------|
| V612 | V612 An unconditional 'return' within a | BigReal.cpp | 109 |
| | loop. BigReal.cpp 109 | | |
| V1071 | V1071 Consider inspecting the | BigReal.h | 25 |
| | 'removeLead' function. The return value is | BigReal.cpp | |
| | not always used. Total calls: 10, discarded | | |
| | results: 1. BigReal.h 25 | | |

The code is submitted with the new clean code after omitting the unconditional return.

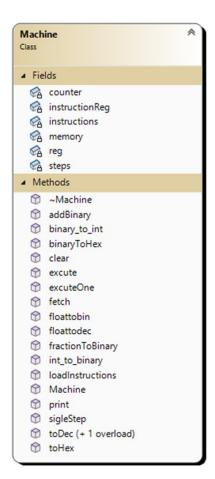
2.B-In task 3 (Machine Language Simulator):

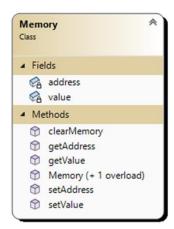
| Code | Message | File | Line |
|------|--|-------------|------|
| V730 | V730 Not all members of a class are | BigReal.cpp | 109 |
| | initialized inside the constructor. Consider | | |
| | inspecting: opCode. Instruction.cpp 4 | | |
| V730 | V730 Not all members of a class are | BigReal.h | 25 |
| | initialized inside the constructor. Consider | BigReal.cpp | |
| | inspecting: steps. Machine.cpp 12 | | |

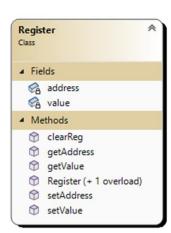
The code is submitted with the new clean code after initializing the constructor of the classes.

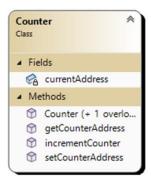
Attached the new version of the code.

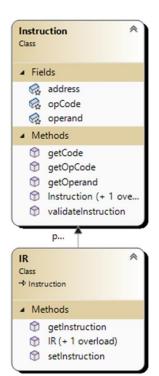
Class Diagram:











Git Commits:

