CSC 541 Fall 2012 Homework 2, Written

Due date Oct 3, midnight.

This assignment is part of assignment 2 (the programming component will be assigned later).

You are given a program `TestProgram()` that consists of invocations for 4 different subroutines. Analyze the behavior of a single invocation of `TestProgram()` and estimate its costs given the specifications below.

```
TestProgram () {

 count = 0;
 while (count <=  3)
 {
   A();
   B();
   If (count < 3)
     C();
   else
     D();
   count++;
 }

}
```

Assume that the actual costs for method `A()` = 5 units, `B()` = 5 units, `C()` = 10units and `D()` = 20 units. Derive the (a) worst case complexity for a single `TestProgram()` invocation. For the same single invocation, derive its amortized complexity using the (b) aggregate, (c) accounting and (d) the potential methods.

Submission Instructions: Upload a typeset or clearly handwritten file to the Moodle submission locker for the assignment.