

BRAC UNIVERSITY
Department of Computer Science and Engineering

Examination: Quiz 4
Semester: Fall 2024

Duration: 15 min
Full Marks: 10

CSE 470: Software Engineering

Name:

ID:

Section:

Mita was excited to start her new job as a software engineer at a tech startup. She was given a task to develop a feature for the company's app. However, after finishing her code, her senior found several code smells. She spent time researching and learning about best coding practices, and how to eliminate code smells. Lastly, she worked on refactoring her code.

1. Write down any code smells that may have caught the attention of Mita's boss. [2]
2. Refactor the program as needed. [4]
3. What is the purpose of code refactoring? [4]

<pre>public class Calculator { //calculating the perimeter of Circle with the radius public double calPC(double r) { double pi = 3.14; double result = 2 * pi * r; return result; } //calculating the Area of Sphere with the radius public double calSSA(double r) { double pi = 3.14; double result = 4 * pi * r * r; return result; } }</pre>	<pre>//calculating the Surface of Cylinder with the radius and height public double calCSA(double r, double h) { double pi = 3.14; double result = (2 * pi * r * h) + (2 * pi * r * r); return result; } //calculating the Surface area of Cone with the radius and height public double calCSA(double r, double h, int v, int t, int g) { double pi = 3.14; double s = Math.sqrt((r * r) + (h * h)); double result = pi * r * s + pi * r * r; return result; } }</pre>
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- 1) inappropriate method naming
- 2) poor parameter/argument/variable naming
- 3) unused/dead parameters
- 4) repeated statements/more than once is redundant
- 5) preferably should have different names