



**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)**  
Faculty of Science and Technology (FST)  
**Department of Computer Science (CS)**  
Object Oriented Programming 1  
MidTerm Lab Task-2

**1. Develop Following Java classes:**

**Note: Student must follow the exact name of class, member variables, and functions.**

|          |                                                             |                                                                                                                        |
|----------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Student  | String name<br>String id<br>String department<br>float cgpa | Member variables<br>declare private                                                                                    |
|          | 2 Constructor (Empty, valued)                               |                                                                                                                        |
|          | showInfo                                                    | Method                                                                                                                 |
|          | Setter Methods                                              | Example:<br>setName(String name)<br>String getName()                                                                   |
|          | Getter Methods                                              |                                                                                                                        |
| Triangle | int x<br>int y<br>int z                                     | Member variables<br>declare private                                                                                    |
|          | 2 Constructor (Empty, valued)                               |                                                                                                                        |
|          | showInfo                                                    | Method                                                                                                                 |
|          | testTriangle()                                              | It will check whether the triangle is equilateral (3 equal sides), isosceles (2 equal sides), scalene (no equal sides) |
| Product  | String productName<br>int productQty<br>double productPrice | Member variables<br>declare private                                                                                    |
|          | 2 Constructor (Empty, valued)                               |                                                                                                                        |
|          | showInfo                                                    |                                                                                                                        |
|          | double calculate()                                          | Total value of product                                                                                                 |

**2. Create an application which manages an inventory of products. Create a product class which has a price, id, and quantity on hand. Then create an inventory class which keeps track of various products and can sum up the inventory value.**

Good Luck!

