**Assignment 8 - Design Patterns**

Identify the design pattern from the code snippets below.

Part 1

public interface Encryptor {

String encrypt(String plainText);

String decrypt(String encryptedText);

}

public class AESEncryptor implements Encryptor {

...

}

public class BlowfishEncryptor implements Encryptor {

...

}

Answer-Decorator Structural Patterns

Part 2

public final class Configuration {

private static final Configuration INSTANCE = new Configuration();

public static final Configuration getInstance() {

return INSTANCE;

}

}

Answer-Singleton Creational Pattern

Part 3

public interface ProductInventoryManager {

ProductInventory getProductInventory(Product product);

}

public class SAPInventoryService {

XMLObject getCurrentStock(String productCode) {

// Retrieve current product stock from SAP.

}

}

public class SAPInventoryManager implements ProductInventoryManager {

private final SAPInventoryService inventoryService;

public SAPInventoryManager(final SAPInventoryService inventoryService) {

this.inventoryService = inventoryService;

}

public ProductInventory getProductInventory(Product product) {

final XMLObject sapInventoryStatus = inventoryService.getCurrentStock(

product.getProductCode());

final ProductInventory productInventory = new ProductInventory();

productInventory.setAvailableQuantity(sapInventoryStatus.get("qty"));

return productInventory;

}

}

Answer-Adapter Structural Pattern