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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **Software Design and Analysis** | **Course Code:** | **CS-3004** |
| **Program:** | **BS (Computer Science)** | **Semester:** | **Fall 2023** |
| **Duration:** | **30 Minutes** | **Total Marks:** | **20** |
| **Quiz Date:** | **6-Nov-23** | **Roll No.** |  |
| **Section:** | **BCS-5K** | **Name:** |  |
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**Question 1) Define Coincidental Cohesion and Functional Cohesion along with examples. (10)**

**Question 2) Refactor the code by applying SOLID Principles and mention which SOLID principle is violated by this code? (10 Marks)**

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| **class SingingMermaidAction {**  **public:**  **void sing() {**  **cout << "Sings melodious songs." << endl;**  **}**  **void combHair() {**  **cout << "Combs hair with a fork." << endl;**  **}**  **void collectPearls() {**  **cout <<” Collects shiny pearls from sea" << endl;**  **}**  **};**  **int main() {**  **SingingMermaidAction mermaid();**  **cout << "Mermaid's Actions:" << endl;**  **mermaid.sing();**  **mermaid.combHair();**  **mermaid.collectPearls();**  **}**  **// SRP is violated in this code** | **class SingingMermaidAction {**  **public:**  **void sing() {**  **cout << "Sings melodious songs." << endl;**  **}**  **}**  **class CombHairAction {**  **public:**  **void combHair() {**  **cout << "Combs hair with a fork." << endl;**  **}**  **}**  **class CollectPearlsAction {**  **public:**  **void collectPearls() {**  **cout <<” Collects shiny pearls from sea" << endl;**  **}**  **}**  **int main() {**  **SingingMermaidAction singMermaid();**  **CombHairAction combHairMermaid();**  **CollectPearlsAction collectPearlsMermaid();**  **cout << "Mermaid's Actions:" << endl;**  **singMermaid.sing();**  **combHairMermaid.combHair();**  **collectPearlsMermaid.collectPearls(); }** |