



Course:
Program:
Duration:
Quiz Date:
Section:

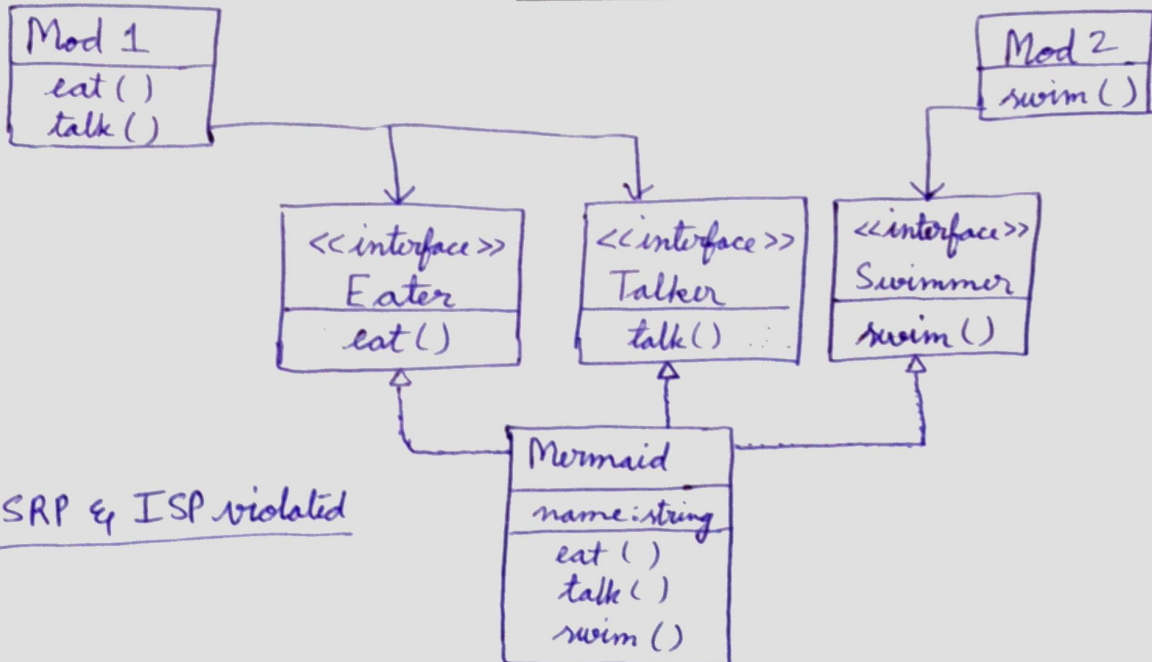
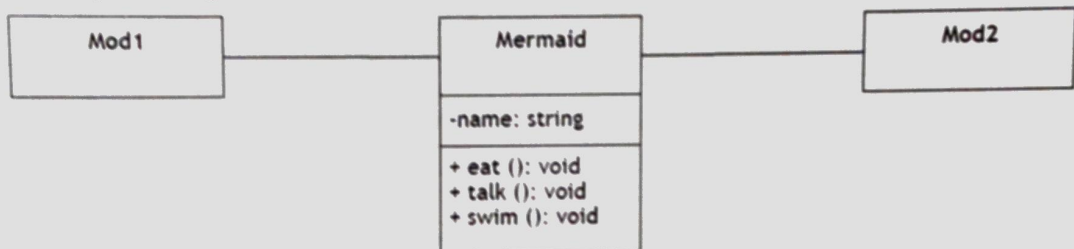
Software Design and Analysis
BS (Computer Science)
30 Minutes
7-Nov-23
BCS-5F

Course Code: CS-3004
Semester: Fall 2023
Total Marks: 30
Roll No.
Name:

Question 1)

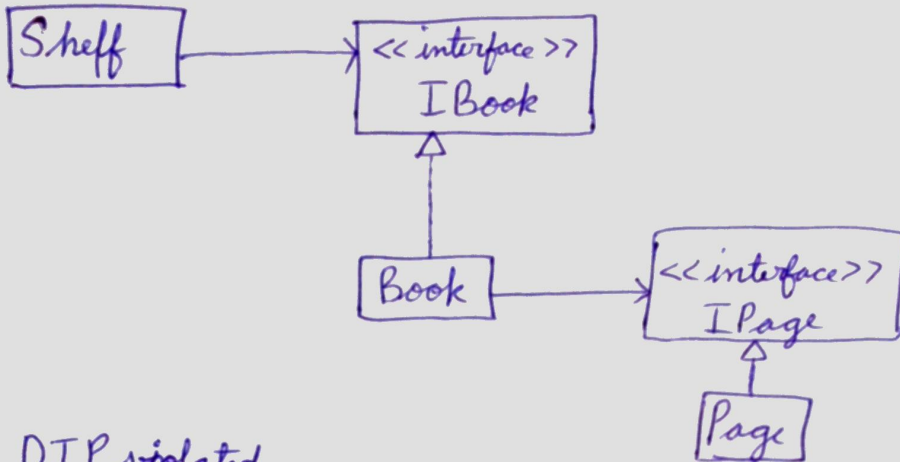
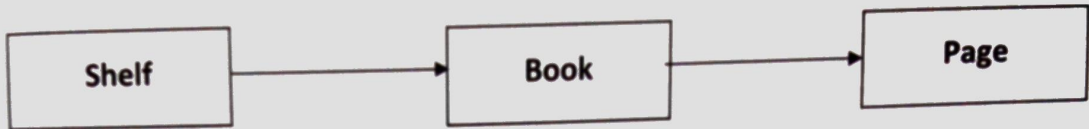
(10 marks)

Consider a video game that has different creatures and characters. One interesting creature is a mermaid. The mermaid eats and talks like a woman, and swims like a fish. The Mermaid class provides all these three functions. This game has several modules. One of these modules (Mod1) uses only eat and talk functions of the Mermaid class while another (Mod2) uses only the swim function. Refactor (improve) the design given below in the light of SOLID principles. Also Mention the principles that are violated by this design.



// SRP & ISP violated

Question 2) Refactor (improve) the design given below in the light of SOLID principles. Also Mention the principles that are violated by this design. (10 marks)



// DIP violated

Question 3) If a cycle occurs in Uses Graph what problem could it potentially cause and how to resolve that issue? Explain in detail. (10 Marks)