Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Final Examination, Fall 2024

Course Code: SE 221; Course Title: Object Oriented Design

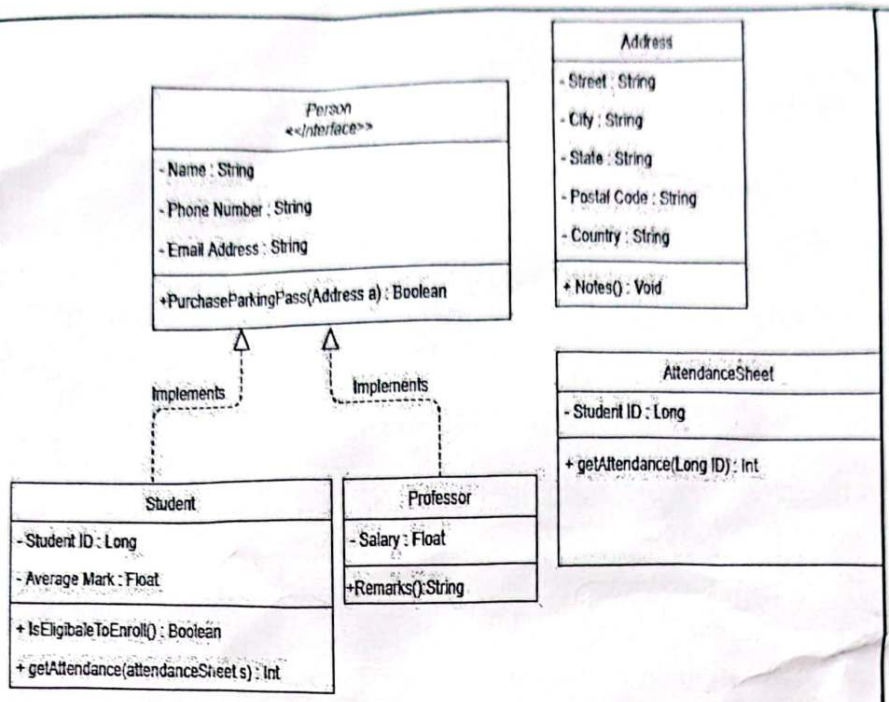
Sections & Teachers: [40(A-C)]AG, [40(D-G)]MBH, [40(H-I)]DB

Time: 1:30 Hrs **Marks: 25**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	*a)*	Suppose you have to develop a Car booking System for an online platform. All bookings have attributes like a bookingID, customerName, destination , pickUpPoint and approximateCost. But only Premium users can instantly book a vehicle.The Diamond users can set the speed limit for the ride. In this system, one premium or Diamond user can book a vehicle for later which is not available for normal users and this type of booking will provide a discount of 20% from the current fare. Diamond users can play movies during the journey where premium users can play music only. Consider the above scenario and **picturize** a complete class diagram with standard notations. Please remember, you can not disclose the data of one end to another	**[Marks-10]**	**CLO-1** *Level-2*
2.	*a)*	In Q1, have you used any kind of Object oriented concept among the 4 pillars? Demonstrate the need of these concepts with some other code examples.	**[Marks-3]**	**CLO-3** *Level-3*
	b)	When can we use try, catch and finally blocks in JAVA? Examine with a proper scenario while creating an object.	**[Marks-2]**	

3.	a)	 **According to the above class diagram, Figure out proper working code segments together. Must build the main method in a different class and inside the main method, make the object of each class.**	[Marks-8]	CLO-2 *Level-4*

	b)	**Figure out the output of the following code**
		
		`class Vehicle{`
		`  void drive(){`
		`  System.out.println("Driving my vehicle...");`
		`  }`
		`  void speedUp(){`
		`  System.out.println("Speeding up my Vehicle...");`
		`  }`
		`}`
		`class Car extends Vehicle{`
		`  void drive(){`
		`  System.out.println("Driving a car...");`
		`  }`
		`}`
		
		`class Main{`
		`  public static void main(String[] args){`
		`  Vehicle v = new Car();`
		`  v.drive();`
		`  v.speedUp();`
		`  Car c = new Vehicle();`
		`  c.drive();`
		`}`
		`}`
			[Marks-2]	