Quiz-3
(V-1)

Q1. Consider a Library Management System. This system is responsible for managing library resources such as books, magazines, and DVDs, as well as handling borrowing and returning activities by library patrons. **(5 marks)**

Your task is to design a **Level-0 DFD** that illustrates the primary interactions between the system and external entities, including library patrons and librarians.

Q2. Consider a car ownership system. Each car has an owner. Every owner can own multiple cars. An owner could be a person or a company. A person can work for multiple companies and a company can hire multiple persons. Each owner has a name and each car has a chassis number, model, make, and license number. Every person has a CNIC number and birth date and every company has an NTN**.** Design a **class diagram** for this system. **(5 marks)**

Note: Mention the attributes, cardinalities, and relations (association / aggregation / composition) with correct UML syntax.

Quiz-3
(V-2)

Q1. You've been tasked with designing a **level 0 data flow diagram (DFD)** for a Healthcare Management System responsible for overseeing patient care in a hospital. This system plays a crucial role in managing various aspects of patient care, including appointment scheduling, medical records management, and treatment planning, to ensure efficient and effective healthcare delivery. Your task is to create a level 0 data flow diagram that illustrates the primary interactions between the system and external entities, such as patients, healthcare providers, and administrative staff. **(5 marks)**

Q2. Consider a car ownership system. Each car has an owner. Every owner can own multiple cars. An owner could be a person or a company. A person can work for multiple companies and a company can hire multiple persons. Each owner has a name and each car has a chassis number, model, make, and license number. Every person has a CNIC number and birth date and every company has an NTN**.** Design a **class diagram** for this system. **(5 marks)**

Note: Mention the attributes, cardinalities, and relations (association / aggregation / composition) with correct UML syntax.