ITS 1012 – Database Management Systems
In class Quiz - 01
Time: 2 hours

1. What is an ERD? and why do we need to create an ERD before implementing software? **[10 Marks]**

2. Briefly explain the following attributes types with an example. **[20 Marks]**
   - **Key Attribute**
   - **Composite Attribute**
   - **Multivalued Attribute**
   - **Derived attribute**

3. Briefly explain the type of the following relationship with real-world examples. **[20 Marks]**
   - **Unary relationship**
   - **Binary relationship**
   - **Ternary relationship**

4. There is a business called "**Navorow**" medical center which gives an opportunity for patients to channel a doctor who visits the medical center. To this medical center, doctors come from many hospitals to this dispensary for private practices and also some of the doctors are working permanently in this dispensary. Each doctor has a schedule for the week which means, doctors have given days and available time of his/her channeling for the entire week. With the intention of expanding the business, improving efficiency and avoiding the conflicts, the management of the "**Navorow**" has decided to develop a software application to handle the receptionist duties. The main duties of receptionists are, answering patients queries and making channels for doctors according to the patients' preference. **[50 Marks]**

   Proposed system functionality
   - add doctors (when adding doctors to the system, remember you should think about other relevant details of doctor for example, the majority of doctors have specific fields and hospitals).
   - add patients
   - create doctor's schedule
   - make appointment
   - search doctors to the given criteria

System Reports
- Patient list and doctors list
- Appointment list of each doctor
- doctors' income for a given period
- the company income for a given period
- profit of the month

Imagine you are asked to develop this software solution for the above company. At the first stage of development, you are supposed to analyze the business and gather requirements. After completing the requirement analysis process, you are supposed to accomplish the **ERD.**