

# Introduction of Database Systems

## Assignment 1

**Total Marks: 40**

**Create the ERDs for the given case studies and then convert these ERDs into Relational Schema.**

### **Case Study 1: Amazon**

Amazon is a global e-commerce platform that offers a wide range of products, from books and electronics to home goods and clothing. Customers can create accounts and save their shipping and payment information to make future purchases faster and more convenient. Each user can place multiple orders, and each order can contain multiple products. The products can belong to multiple categories, and each product can have multiple reviews associated with it. The reviews have attributes such as text, rating, and date. Therefore, there are several relationships between the entities, such as each user placing multiple orders, each order containing multiple products, and each product belonging to multiple categories.

### **Case Study 2: Upwork**

Upwork is a freelancing platform that connects businesses with independent professionals. Clients can post job opportunities, and freelancers can create profiles and bid on projects that match their expertise. Each client can post multiple jobs, and each job can receive multiple proposals from freelancers. Each freelancer can submit multiple proposals, and each proposal has attributes such as proposal ID, hourly rate, and estimated completion time. When a client and freelancer agree on the terms of a project, they enter into a contract with each other. Each contract has attributes such as contract ID, start date, and end date. Therefore, there are several relationships between the entities, such as each client posting multiple jobs, each job receiving multiple proposals, and each contract being associated with multiple jobs and freelancers.

### **Submission:**

1. Submit the Hardcopy as well as softcopy using ERD Plus tool
2. Your submission will include
  - a. All entities with clear identification of type of entities
  - b. All attributes with clearly identification of type of attributes
  - c. Entity Relationship Diagram
  - d. Entity Relationship Diagram to Relational Schema Conversion.
3. The deadline for softcopy is **Thursday April 6, 2023 till 11:59 PM.**
4. The deadline for hardcopy is **Friday April 7, 2023** in the class.
5. No late and retake submissions will be entertained, otherwise there will be plenty of deduction in marks.