

## **CS 331 (Software Engineering Lab)**

### **Assignment 3 (Total Marks = 40)**

#### **A. Creating the Data Flow Diagram (DFD)**

Part A aims to check the flow of data within your system.

Q1. Draw a Context Diagram or Level 0 DFD to depict the overall process used by your system. **[Marks = 5]**

Q2. Draw a Level 1 DFD to depict the data flow and corresponding processes. Also, show the different data stores in the DFD. **[Marks = 5]**

#### **B. Covering the Structural Aspects of the Software**

Part B aims to capture your project's structural characteristics using UML diagrams.

Q1. Identify the key classes involved in your software. Name the classes and identify each class's attributes and functionalities (methods). Mention the visibility (public, private, and protected) of the attributes as well as the functions (methods) of each class. **[Marks = 10]**

Q2. Set up relationships (inheritance, association, aggregation, composition, etc) among the classes by properly drawing the UML class diagram. Mention any cardinality assumed in a relationship in the UML class diagram. **[Marks = 10]**

#### **C. Implementation of Key Modules**

Please implement at least two key modules of the software. **[Marks = (5\*2) = 10]**