SE 2217 Software Engineering Principles – Lab #8

Data Flow Diagrams

Data Flow Diagram (DFD) is a diagram being used frequently in software design. It visually represents the flow of data throughout processes in a given system. It shows the kind of information that will be input to and output from processes as well as where the data will be stored.

In this labwork, you are expected to draw different levels of DFD for the system given below.

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The Ticket Sales System for Football Matches

Suppose that you are working in the software department of a football club, and your system is selling tickets online for the upcoming match(es).

A *Supporter* (in other words, Football Fan) types and sends the **ticket information** (personal information, seat selection, etc.) to the system, then makes the **payment**. The *Purchase Ticket* process receives the **ticket information** and **payment** and sends the **payment** to the *Football Club* and passes the **bill** and **ticket** to the Supporter.

Inside the Purchase Ticket process, the *Verify Payment* function is the function that gets the **payment** and sends a **bill** to the Supporter. The *Save Information* process takes the **ticket information**. Then **verified payment** and **saved information** data go to the *Create Request* function, respectively. The *Create Request* function processes both data and creates and passes a **ticket request** to the *Request* database. The *Create Ticket* process takes the **ticket request** from the *Request* data store as input and processes it to create a ticket. Supporter receives the **ticket** from here. Additionally, the *Verify Payment* process is the process that sends the payment to the *Football Club*.

A Supporter can *Return Ticket* by providing **ticket & bill information.** As a result, **refund** and **refund receipt** are sent to the Supporter.

Each **ticket information** (**canceled ticket information** by *Return Ticket*, or **generated ticket information** by *Purchase Ticket*) is passed to the *Ticket* data store. The *Generate Report* process takes the **ticket information** from here as input, generates **a ticket report, and** sends it to the *Stadium Manager* to inform him/her about the status of tribune.

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In line with this story, draw the Context Level Diagram, Level-0 Diagram and Level-1 Diagram for Purchase Ticket process.

While exporting, please choose your export type as PDF (Diagram per page) to gather all your diagrams in a single document. Name it as **YourStudentNumber.pdf** and upload it under the related assignment.