TO: Dean Steve Wiltkerbad

FROM: Roger Baumbach II

RE: University Resident Hall Complaint System: Context Diagram

DATE: October 4, 2013

A Data Flow model is a business model that visually depicts the flow of data within an information system. The Data Flow model is a method of process modeling that is used to help analyze the process that captures, manipulates, stores, and distributes data between a system, its components, and the environment. The diagram attached, a context diagram, is a way of visually seeing the conceptual flow of data around the system. It shows the type of structure the data requires and the functions that are necessary for implementation.

In the system, there will be a total of 7 outside “agents” that communicate with the proposed system. The Agents in the proposed system are the Dean of the University, Office of Public Safety, the University Judicial board, a Federal Agency, Residence Hall Directors and the Residence Hall Assistants, Students who have been written up, and the University’s Provost Office. The Dean of the University interacts with the system in 3 separate scenarios. The University Judicial Board meets to discuss the cases of reported students and interacts with the system twice. The Office of Public Safety is the main actor within the system. This office utilizes the system for four reasons (one monthly, the other multiple times a day). Annually, an Agency outside of the School will request information from the system for legal purposes. The Residence Hall Directors and the Residence Hall Assistants interact with the system for three different reasons. Students who have been reported by the residence hall directors and assistants are able to interact with the system in three different ways. The University’s Provost Office only hears from the database system on one occasion.

Each agent utilizes the database for a specific purpose. There are two types of interaction between agents and the database system: temporal and external. Temporal events (events or occurrences because of time) are triggered by the database or external user after a specific amount of time has passed and a routine event must proceed. External events take place every time an external agent (an entity outside of the system) attempts to communicate with the database by passing or receiving data through the system in a non-time based manner. Most events are going to be external events because the events are not triggered on the basis of time. An example of an external event is the automatic forwarding of all resident complaints to the Dean for initial sorting (whether it goes to the judicial court or the Office of Public Safety). The reason this event is external is due to the original event. The Residence hall’s staff submission of the grievance report is sent to the system then forwarded to the Dean. This is an external event triggered by an external agent. The office of the Dean has the ability to request the new reports by way of an external event (triggered by the external agent—the Office of the Dean). The Database sends out a list of the new grievance reports to the Office of the Dean by way of an external event (an event that was originally triggered by the previous external event). The Dean’s office forwards their decision back to the system with details as to which office should handle the case. This is an external event (an event triggered by an external agent, the Office of the Dean). The University Judicial Board receives several new cases that require the board’s immediate attention. This is an external event because it is triggered by an external agent. The board then sends a response to the system after they have made their final judgment on the case at hand (an external event triggered by an outside agent). The Office of Public Safety uses the system for three reasons when their presence is required and updates the records for each case as it progresses (external, triggered by Public Safety). Public Safety also has a fourth interaction in which the office creates monthly reports that are stored for federal reporting at the end of the year by means of a temporal event. This event is temporal because it is done on the basis of time. It is only performed by the outside entity once each month. A federal Agency contacts the school annually, requiring the Department of Public Safety to send its monthly reports (that were sent to the system) to their office. This is a temporal event because it is done on the basis of time (once a year). The Residence Hall Directors and Assistants share the same role within the system. They both participate in an external event in which they send a report to the system detailing an incident that has occurred, allowing them to access the information regarding the report. The student in question now starts to interact with the database after the initial report. They receive notifications about their case every time it is updated. The student is able to request access to the database for the status of their case and any information regarding it. This is an external event because it is initiated by an external agent (the students). After the system has processed the request, the student receives information about their case (an external event, triggered by the student request for data on their case). The final agent, the University’s Provost Office, receives a forwarded list from the database once a month that contains the monthly reports that the Office of Public Safety sends to the system. This final event is external because it sends the information to the Office after Public safety has triggered the system.