

## Assignment 3

### Use Cases and Data Flow Diagrams (DFDs) (100 Pts)

Due Date: Sunday, November 1, 2020 at 11:59 pm

#### INSTRUCTIONS

- Please follow the instruction in the individual sections, then attempt the questions that follow. You may consider using all available resources including textbooks, journals, internet etc. however, you **MUST** acknowledge your sources by clearly including citations and references using **APA citation style**. Submissions should include:

#### GROUP SUBMISSION

- A group document/report, which addresses all the issues/problems in the opportunities and challenges section. The document should be well formatted with numbered headings (e.g., 1, 2, 3, etc.) and sub-headings (if applicable, e.g., 1.1, 1.2, etc.), 1.5" line spacing; font: Garamond 11 pts, paragraph spacing 12 pts before, and page numbering. Write the names of all group members with the associated student IDs on the front cover. Please submit an electronic copy of this document in the assignment D2L.
- Create a front cover marked as **'MIS 413: Systems Analysis; Assignment 3 (Use Cases and Data Flow Diagrams)'** with your name, and the date of submission.
- Use and insert the **Semaphore cover page** using the cover page button in the Pages group on the Insert Tab. Fill the placeholders with the corresponding information and delete those not required.
- Insert a table of contents using the Automatic Table 1 style. (Hint: Use the Table of Contents button in the Table of Contents group on the References tab). You will have to use headers style in your document for this to work.
- All group members should write their names and sign the academic integrity document, which should be attached after the front cover.
- A brief description of individual contribution towards the assignment, which should be signed by all group members. Please highlight and identify how you think you contributed. The signatures will serve as an attestation of the contribution of the individual group member. Please note that all group members will receive the same grade awarded to the group. However, the Instructor will penalize and deduct points at his discretion if a member is deemed not to have contributed significantly towards the group assignment based on the evaluations on the **peer evaluation forms** to be completed by each team member. Be fair and honest when detailing how you contributed.

#### SOFTWARE

Use a CASE tool (e.g., MS Visio, Lucid Charts, etc.) to produce the Use Case Diagram and DFDs. All diagrams should be legible to avoid point deductions.

#### LATE SUBMISSION

- This assignment will follow the late submission policy as defined in the course syllabus.

### Problem

You are to create a set of use cases and data flow diagrams for the Embassy Website. The primary purpose of the enhance the embassy's services to users and chanced fact finders. You have already determined and documented the requirements, and this task is to progress from that. You are free to make assumptions but **MUST** justify them. Remember these can be validated with the client.

### Section A: Use Case Diagram - 30 points

Create a UML Use Case diagram of the Embassy Website. In this diagram, you will include all the elements of a use case diagram, i.e., *the actors (could be a user, external system, physical environment), use cases (functions of the system that yields results for the actor, and specify the boundary of the system.* Please use <<include>> and/or <<extend>> where applicable in the diagram. Make sure you name the use case diagram as "Embassy Website".

## **Section B: Use Case (Text-based) Documents - 35 points**

This section is based on Use Case Analysis of Chapter 4. The purpose of this exercise is to establish the Use Cases for the Embassy Website.

### **What you need to do**

1. Utilize the Use Case template to document all the use cases in the use case diagram
2. Produce the use cases. Ensure that all the key elements of the template are completed: *use case name, number, actor, brief description, priority, trigger, major inputs & outputs and associated sources, and associated destinations* for the proposed system.
3. The *major steps performed/ normal course* in each use case should be listed. This means an outline of the sequence of events aids in ensuring that all steps are included.

## **Section C: Data Flow Diagrams (DFDs) - 35 points**

This section is based on Process Modeling of Chapter 5. The purpose of this exercise is to establish the Data Flow Diagrams for the Embassy Website. These DFDs will be based on the use cases developed in Section A/B.

### **What you need to do**

1. Produce (draw) a *Context Diagram* of the Embassy Website.
2. Produce (draw) a *Level 0 Diagram* of the Embassy Website based on the use cases produced in Section A.
3. Produce (draw) *Level 1 diagrams* of the Embassy Website by decomposing each process in Level 0 in more detailed. Produce Level 1 diagrams for only two of the main processes of your choice in Level 0.

### **Grading Points**

#### **Use Case Diagram**

- All possible use cases modeled – 10 points
- All possible Actors modeled – 10 points
- System boundary and name given – 5 points
- <<include>> and <<extend>> labeled where applicable – 5 points

#### **Use Case Documents**

- All possible use cases documented – 10 points
- All elements of the use cases described where applicable – 10 points
- Major steps/normal course described correctly for each use case – 10 points
- Utilize the template to document the use cases – 5 points

#### **Data Flow Documents (DFDs)**

Context diagram (10 points)

- Diagram created with the main system, the actors and accurate data flows labeled

Level 0 diagram (10 points)

- Diagram created with the possible main processes
- All the necessary actors modeled
- The necessary data stores modeled
- Accurate data flows labeled

Level 1 diagrams (15 points)

- Diagrams created with the possible main processes
- All the necessary actors modeled
- The necessary data stores modeled
- Accurate data flows labeled