Assignment 1: Business Process Modelling

1. Description:

This is an individual assignment and is worth 20 marks. Please submit a digital copy to the Moodle site by the due date.

2. Assignment details:

Quality and service excellence is the cornerstone of the University of Wollongong Library commitment to staff and students. Located throughout NSW and the world, libraries and access centres support over 20,000 students and staff, providing access to half a million books, over 106,955 journal titles, 610 databases (online collections of journal articles) and 246,450+ e-books.

The handling of delays for delivering books and journals back to the library today is very inefficient. The existing IT system is able to automatically send a reminder to the customer about the delay, but the handling of the delay is done purely manually by the librarians if the customer does not return the book or journal. The management of the Library has decided that the delay process should be managed by a business process management system. A business consultant interviewed a number of librarians about how they handle delays. The interviews result in a heterogeneous view of the practice of handling delays. The (hypothetical) scenario of handling a delay can be summarised as:

A delay can be recognised automatically by the existing library management system in the morning of the next day after the due date. An email will be sent to the customer automatically, requesting him/her to return or renew the book. If the book has not been returned a week later, a librarian will be notified by email. The librarian looks up the delayed customer in the IT system. If there is a phone number registered, she tries to call him by phone, else she writes a letter telling about the delay, that he already has received one reminder and that he will be charged a fee for the delay. If the book has not been returned a week later, the librarian will send another letter to the delayed customer informing him that the case will be escalated if the book is not returned in the next 7 days. In about 60% of the cases, the customer in question returns the book any time during this period. In such cases, the library system calculates the late return penalty of $0.5 per day and attaches the fee to the customer's account. After that, the process is aborted. In about 30% of the cases, the customer in question reports that the book has been damaged or lost any time during this period. In such cases, the library system checks the cost of book, and attach this fee to the customer's account. After that, the process is aborted. In other 10% cases, the librarian escalates the case to her manager, who takes over.

If the delayed customer is a student, the manager contacts the academic registry department to suspend the student account. If the delayed customer is a staff member, the manager contacts the Personnel unit to suspend the staff payroll. After that, the manager contacts the bad payment register through a web browser to register the customer as a bad payer. After that, the manager attaches a fee payable to the customer's account and request the customer to pay. The fee is calculated as the cost of the book plus the late return penalty and the administrative fee. The case will be closed by the manager when the charged amount is paid in full. When the case is

closed, the manager will notify the academic registry department or the personnel unit to lift the suspension. Occasionally, the customer might return the book and also pay the fee in full. In this case, the cost of the book will be refunded. In some other cases, the customer returns the book without paying the fee. The case remains open but the amount the customer owes will be changed. Sixty days after the delay is first identified, if the case is still open, the manager change the status of the case to "forced close" and contacts a debt collection agency by phone to collect any outstanding fee.

You are employed as an IT architect for the library. You are responsible for modelling the above delay handling business process using BPMN. You will need to identify events, activities and decision points, and show the complete library private process and its interactions with external entities. Create your business process diagram at https://bpmn.io/ or using Bizagi BPMN modeller (https://www.bizagi.com/en/platform/modeler) installed in your own laptop. Where the description is not clear, you can make your own assumptions. You will need to draft a supporting document to explain your assumption and submit it together with your process model.

ISIT332 Assignment 1 Marking Sheet

Student Number		**Student Name**		**Marked by**
	Excellent	**Satisfactory**	**Poor**	**N/A**
Key elements identified (e.g., events, activities, gateways) (6)				
Objects connected correctly (6)				
Primary elements grouped correctly (3)				
Artifacts described correctly (2)				
Descriptions meaningful and helpful (3)				
Overall Mark	**/20**			
Overall Comments				