Subject:	Programming 321
Assessment:	Project 2
Due date:	2018-08-01
Total:	60 Marks

Introduction

The objective of the project is design and implementation of an interactive “Leave Management System” for the Human Resources Department at Pretoria, Belgium Campus. The Leave Management System automates the process of managing and tracking multiple types of employee leaves. Employees can submit the leave form, cancel previously submitted leave requests, check the status of leave requests and view completed leave transactions. The Leave Management System maintains a database to keep a running balance of each employees account, accumulates employee vacation and sick credits and provides individual reports on employees leave accumulations.

The second phase will form project 2.

Outline

“Leave Management” should be a Graphic User Interface (GUI) system. There are registered employees in the system. Some are approvers. An approver can also be a requestor. The hierarchy could be Lecturer/Dean/ HR etc. Lecturers must send leave requests to the Dean. The dean has the rights to approve/decline leave requests. If the dean approved the leave, the leave request must be sent to the HR department. Once the HR department receives the confirmed leave request, the HR official will calculate the leave pending based on the type of the leave and will send notification to dean and the employee. The Dean can also send his/her leave request to HR as well.

Your system must have four functional areas such as: **Administration, Employee, Dean and HR.**

In project 2 you should make sure **Employee and Dean** areas are functional**.**

Project 2 Functional Requirements:

- **Employee should be able to perform the following:**
    - Login to the system through the first page of the application.
    - Change the username/password after logging into the system.
    - View his/her eligibility details (like how many days of leave he/she is eligible for etc)
    - View employee’s leave history since the time he/she joined.
    - Apply for leave, specifying on the form with the minimum requirements such as: employee details, leave begin date, leave to dates, total number of dates (auto generate), reason for taking leave, type of days: full day or half day address for communication while on leave etc.
        - Fill all mandatory & other fields as required.

    - Fill-in Leave details.
    - Create an 'Add Button', which will help to add details in to the database.
    - Create 'Edit Button' and 'Update Button' in case employee wants to make changes, if any.
    - Create 'Send' Button for forwarding your leave application to dean.
    - If employee send any leave application the message "Leave Application has been forwarded" should display.
  - Employee must be able to view his/her different leave categories such as pending leave request/s, approved leave request/s, cancelled leave request/s and withdrawal leaves request/s in a tabular format. Your application must create different tabs for each leave category.
  - Employee must be able to withdraw his/her leave application (which has not been approved yet).
  - Employee must be able to cancel his/her leave (which has been already approved). This will need to be approved by dean.
  - Employee can view a report about applied leave requests and save it in a file.

- **Dean:**
  - Login to the system.
  - Dean must be able see all the leave requests. Leave request should display in sorted order by date.
  - Dean can approve/reject the requested leave.
  - If the leave is approved, the request must be sent to the HR department. Employee must receive a notification.
  - If the leave is rejected, send a message to the employee.

  - Dean must be able to view different leave categories such as received leave requests, approved leave requests and rejected leave requests in a tabular format. Your application must create different tabs for each leave categories.
  - Dean can search for leave request based on date in all leave categories.

- You should make sure that your system is performing the functional requirements which are mentioned in project 1.

Technical requirements

- Database design must be in 3rd Normal Form
- Use Object Oriented Principles to model your classes and class libraries to reuse your code.
- Multiple employee should be able to send leave application at the same time.

Mark Allocation

Criteria	Weight
Project Analysis	2
Database/table design- CRUD	6
File I/O	3
Form Design/Styling	3
Classes/ package creation and usage	3
Employee requirements functional	18
Dean requirements functional	15
Custom Exception Handling and Usage	4
Threading	3
Multi user	3
Validation	3
User friendly message	2
Navigation	2
Report Generation	3
Total	**70**

Additional Information

- All work must be done on your own.
- Belgium Campus have software that can **scan for plagiarism** and a student caught doing this will get 0 for this assignment.
- Late assignments will not be accepted; missing the deadline is an automatic 0.