

UNIVERSITY OF RUHUNA
BACHELOR OF INFORMATION AND COMMUNICATION
TECHNOLOGY DEGREE
LEVEL II (SEMESTER I) – Mini Project

Course unit: ICT2132 – Object Oriented Programming Practicum

Submission Date: Sunday 11.00 p.m. 19th March 2023

You are required to develop a system using JAVA and MYSQL for faculty of technology for handling

- User Profiles (Admin, Lecturer, Student, Technical Officer)
- Course Details
- Student Marks
- Student Attendance
- Notices
- Timetables
- Medicals

Admin

- Create and maintain all User Profiles
- Create and maintain Courses
- Create and maintain Notices
- Create and maintain Timetables

Lecturer

- Can update their profile except user name and password
- Can modify and add materials to courses
- Can upload marks for all kind of exams
- Can see student details
- Can see student eligibility
- Can see student marks, grades and GPA
- Can see attendance and medical records of students
- Can see notices

Technical Officer

- Can update their profile except user name and password
- Can add and maintain attendance details of students
- Can add and maintain medical details of students
- Can see notices
- Can see timetables of their department

Student

- Can update only contact details and profile picture of their profile
- Can see attendance details
- Can see medical details
- Can see their course details
- Can see their grades and GPA
- Can see their timetables
- Can see notices

- You should store data for 01 admin, at least 04 lecturers, at least 02 technical officers at least 10 students.
- You should record attendance details for 06 subjects with 15 days
 - 01 subject theory only (ICT01 in table 01) and other 03 subjects with theory and practical (Assume that theory and practical both have 15 sessions)
 - If some students have submitted a medical for a day, there should be a way to record it
 - There should be data to cover more than or equal 80% students, less than 80% students and with medical more than or equal 80% students
 - There should be a way to view attendance details as a summary for whole batch and as individuals
 - When there is both theory and practical for a subject there should be a way to check attendance only for theory, only for practical and combined (Assume all theory lectures are 2 hours and practical are 02 hours)
- You should record marks for the subjects as follows (All marks should be out of 100)

Subject code	Quizzes	Assessments	Mid term	Final theory	Final practical
ICT01	10% (best 02 out of 03 quizzes)	-	20%	40%	30%
ICT02	10% (best 03 out of 04 quizzes)	10% (02 out of 02 assessments)	20%	60%	-
ICT03	10% (best 02 out of 03 quizzes)	20% (02 out of 02 assessments)	-	40%	30%
ICT04	10% (best 02 out of 03 quizzes)	20% (02 out of 02 assessments)	-	30%	40%

Table 01

To obtain the eligibility CA part must have more than or equal 50%

- There should be a way to view CA marks details as a summary for whole batch and as individuals
 - There should be a way to see if student/s are eligible according to the criteria of CA to sit for the final exam
 - There should be a way to check eligibility (attendance + CA marks) as individuals and for the whole batch
 - There should be a way to see the final marks only for individuals and whole batch
 - Grade students according to the by law of the faculty
 - There should be a way to see marks for each subject, student and as a whole batch
 - There should be a way to see Grades for each subject, student and as a whole batch
 - There should be a way to see SGPA and CGPA with the subjects and grades for each student and for the whole batch
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01. Based on above given details about the required system draft a Software Requirement Specification (SRS) for the proposed system that you are going to create for faculty of technology.

- Get together as a batch and complete this task

Due date 05th February 2023

Upload soft copy of the SRS to LMS under Mini Project section of the module

(As groups)

02. Create class diagram using UML, and create an ER diagram for the database for your mini project

Due date 12th February 2023

Upload soft copy of the of the class diagram and the ER diagram to LMS under Mini Project section of the module

(As groups)

03. Complete your mini project

Due date 19th March 2023

Submit a report on your project covering all the details

- Upload a soft copy of the report to LMS under Mini Project section of the module
- Clearly write down the individual contribution in the report
- Share the source code of your project by uploading it to a Git repository

(As Groups)

04. Evaluation of the mini project

- Date: to be decided
- Each group must present their progress
 - 15 minutes presentation + 10 minutes discussion
- **There will be an individual evaluation for each group member on their contribution to coding**

Note:

Each Group member must demonstrate the usage of following concepts in their development part of the mini project.

- **Classes and Objects**
- **Inheritance**
- **Abstraction**
- **Polymorphism**
- **Encapsulation**
- **Database Handling**
- **GUI**
- **Exception handling**