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| File:COMSATS new logo.jpg - Wikimedia Commons  Project Proposal PF | **submitted by:**  **Muhammad Qasim Ali**  (Sp21-bcs-066)  **daoud hussain**  (sp21-bcs-102)  **sameem amjad**  (sp21-bcs-081)  **Shahzaneer Ahmed**  (Sp21-BCS-087)  **submitted to:**  **Mr. Rizwan Rashid**  **date of submission:**  **December 13, 2021** |

# UNIVERSITY MANAGEMENT SYSTEM

# Overview:

A console based detailed University management System that further contains Sub-Modules including Student Portal, Transport management, Library management, Sport Management, Café Management. The main Idea of the project is to make a CRUD (Create, read, update, delete) Java Application to manipulate data effectively.

# Modules:

## Student Portal:

* Sign Up/login

User can sign up in concern with the validations that are set to be followed and then login if the registered details are given.

* Email Verification

An email Verification Module will be established for authentication of Account.

* Degree Program Details

Students can see all their details of the sub-modules from main Student portal.

## Transport Management:

* Routes

Routes of Busses will be displayed, User can enter his stop and the route will be assigned to him/her.

* Fees

The fees for different routes will be inferred.

* Timing of buses

Different Timing Schedules of Bus arrival and Bus leaving can be selected.

* Bus-ID

The special Bus-ID will be assigned against each registration number.

* Bus Off Days
* The user can enter the number of days off he wants from transportation and their fees will be minus from the total fees.
* CRUD Operation:

All the function can be Set, viewed, updated and deleted.

## Library Management:

* Displaying books

The menu for available books will be shown.

* Returning Books

The book borrowed earlier will be returned considering the time module.

* Borrowing Books

The book will be borrowed for two days against each registration number.

Membership Criteria

The membership criteria for MS and Bachelor Students will be given. MS Students can take two books at a time and BS Students can only take one at a time.

* Late submission Fine

If the user is not able to return the book at specified time. He will have to pay late submission fine.

## Café Management:

* Menu

The edible items will be displayed along their prices.

* Purchasing Item

The items which user is willing to purchase will be added in the cart.

* Returning Items

If a user wants to return a packed edible-item he/she shall be able to return it If it is a non-packed item then he/she cannot return it. The returned item’s money will be returned back to the student profile.

* Bill Generation

The user’s bill will be generated in the meantime displaying the items purchased.

## Sports Management:

* Sports Items Menu

The Sport Items user can ask for will be represented.

* Borrowing Items

The User can borrow the items on their Student ID’s (Registration no).

* Returning Items

The students can return the items borrowed.

* COMSATS Teams Trials

They can apply for CUI’s Team and can generate their date of Trial.

# Tools And Software:

* The Programming Fundamental tools will be used involving Variables, Literals, Methods, Objects, Data Types, Arrays, File handling, Regex and Exception handling.
* Java SE Application 16th Edition
* IntelliJ Idea by JetBrains.