



MAKERERE UNIVERSITY
COLLEGE OF COMPUTING AND INFORMATION SCIENCES(CoCIS)

COURSE
Bachelors of Information Systems and Technology

Recess Term

Course Unit
CS 1301 Practical Skills Development (Oracle Database)

Lecturer
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QUALITY EDUCATION

Introduction

Quality education refers to a comprehensive approach to teaching and learning that ensures students gain the knowledge, skills, attitudes, and values necessary to lead fulfilling lives, contribute to society, and continue learning throughout their lives. It encompasses various dimensions, including access, equity, relevance, and outcomes.

Implementing an efficient student attendance system is a critical step in enhancing quality education, ensuring all students benefit from consistent, equitable access to learning opportunities and supportive academic environments.

The following are some of the challenges faced in attaining quality education in Uganda;

- i. Resource shortage. This includes insufficient funding, leading to poor infrastructure, lack of education, and inadequate facilities.
- ii. Inequality and accessibility issues. Children from rural areas or low-income families face accessibility challenges.
- iii. Quality of teaching. Teaching institutions suffer from a lack of well-trained and motivated teachers which hinders quality education.
- iv. Monitoring and evaluation. The lack of monitoring mechanisms makes it hard for students to access quality education due to a lack of data for informed decision-making.

Our Student Attendance system, designed with Apex and JavaScript will solve absenteeism in the following ways.

- i. Automated Attendance Recording with RFID/QR Code Scanning on entering the classroom
- ii. Integrated Biometric Systems such as fingerprint or facial recognition systems ensuring accurate attendance tracking.
- iii. Real-Time Monitoring and Alerts through Instant Notifications to students and faculty when someone is marked absent.
- iv. Dashboard Views: Provide administrators and faculty with real-time dashboards to monitor attendance and identify absenteeism patterns quickly.
- v. Data Analytics and Reporting on Absenteeism enforcing trend analysis.
- vi. Engagement and Motivation like rewards for perfect attendance, to motivate students to attend classes regularly.
- vii. Automated Reminders and Follow-Ups
- viii. Integration with Learning Management Systems (LMS) to provide a comprehensive view of student engagement and performance.
- ix. Attendance-Based Access to resources
- x. User-Friendly Interfaces
- xi. Easier Policy Enforcement Implement customizable attendance policies, such as thresholds for absenteeism, and automatically enforce these policies.
- xii. Secure Data Storage, ensuring that attendance data is securely stored and complies with relevant data protection regulations.
- xiii. Meeting compliance demands