Smart Edu

智慧校园管理系统

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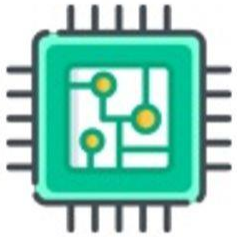
Technology Used

Internet-of-Things (IOT) Technology

Cloud Computing Technology



Radio Frequency Identification (RFID) Technology

Sensor Technology (motion, temperature, light, humidity, etc.)

Ambient Intelligence Technology

Wireless Sensor Networking (WSN) Technology

Augmented and Virtual Reality (AR & VR) Technology

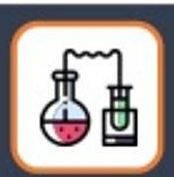
Location and Situation Awareness Technologies (Indoor & Outdoor)

Smart Agents Technology

Remote (virtual) labs

Reduce the number of Human Resources

ERP System



Facilitating the Educational Process

Innovation Center

Smart University

- The student App is where the students controls everything ,it's the hub of all the student systems. As the student can do and track everything he needs either inside or outside the campus from one app.
- The app should always help him do what he needs at given moment in time.
- The app deeply integrate with every other systems.
- All the student services are available online and through the app so the student doesn't have to go to any employee

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Student

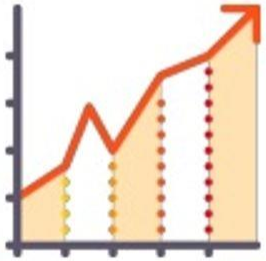
Smart Classroom

Every classroom is equipped by a **projector**

Every classroom has a **camera** that automatically record the class based on the schedule and make it online for the absent student or all the student to review later

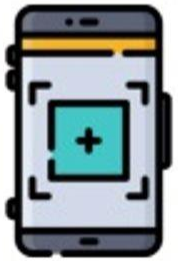
Automatic absence using **QR code & RFID**

Smart Board



The lecturer can see on his app a **brief about the students** and **statistics** to help him know which students needs more attention in the class.

Remote learning option for the courses that allows it.



Screen capture feature so everything that the lecturer write is synced with the students app and presented as one lesson

Reduce the number of Human Resources

ERP System

Facilitating the Educational Process

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Student

Staff

Communication Students & lecturer

The communication either between the student and each other or with their staff should be easy and simple. The **staff can always see his student performance** absence and notes for the student that needs special attention. He can communicate with the student through the **private messaging** advice him through the course, send him special materials or certain topics to review.

The students can **post in the group of the subject** either to share information or discuss certain topic. The student can also **share anything from their cloud to any other student**. Also a **private messaging** is available between the student and each other.

Reduce the number of Human Resources

ERP System

Facilitating the Educational Process

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Student

Smart Library

Online booking a book and Online **table reservation**

Main hub for **searching** and **checking book availability**

iPads area for eBooks reading

Auto Book Checkout

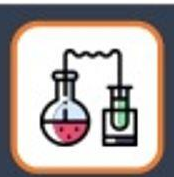
Ability to **scan images** and send it to student cloud

The library may **suggest books** that may interest the student based on the subjects he studies, the previous reading and the interests that the student specifies

Library Maps so the student can see empty spots to sit in

Reduce the number of Human Resources

ERP System



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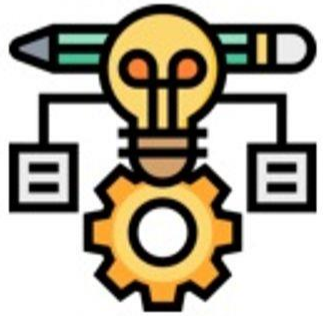
E-learning

E-Books

Adaptive learning programs and learning portfolios for students

Learning Management System (LMS)

Online Exams



Project Collaboration and sharing: the students should make use of the cloud services to **store all the project papers** and work on the cloud so they can collaborate easily and makes it easy for the instructor to track the work of each one of them in the project, Also it can be **used as reference for the future** students at this subjects. Also a audio/video conference feature can be used to help the group work together or with their lecturer.

Smart gates

The campus main gate and every other building gate is **equipped by RFID reader.**

It is easy to **detect all the students, employee's and guests movement** throughout the campus. also help track the equipment's equipped by **RFID Sensor**.

Cloud Account

Each student has his online storage in which he can store his academic documents and notes and share it with everyone.
Also through office 365 video & audio calling group conference is available.

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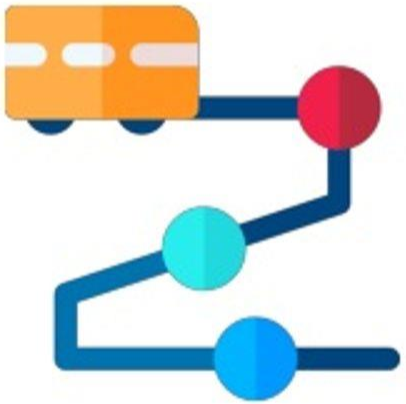
Student

Staff

Bus System

The ability of the students and the staff to use the bus app



Track the bus in Realtime

Reminders before the bus arrive based on the current location and **notify if any delays** happen

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Vehicles System

Staff

A hub system for the moderators

See **live feed** from the buses on a big screen with **live tracking** of all the buses

Ability to modify and monitor all **vehicles stats** easily

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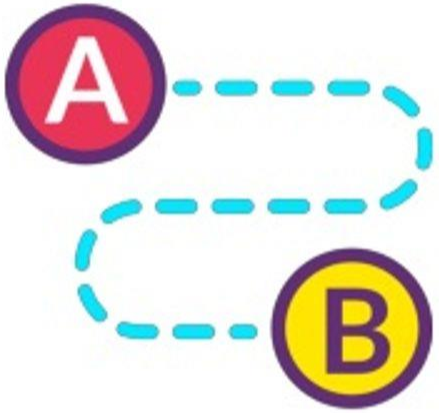
Student

Staff

External Visitors

In-Campus Routing



Students should be able to go from one place in the campus to the other without any effort or external assistance so the app provide **in-campus navigation** using special-map for the campus.

For the **external visitors** and one-time users their will be **screen at every building** that contain app to **help the external visitors lookup anything in the campus and tell them the directions** to their desired destination.

Reduce the number of Human Resources

ERP System

Facilitating the Educational Process

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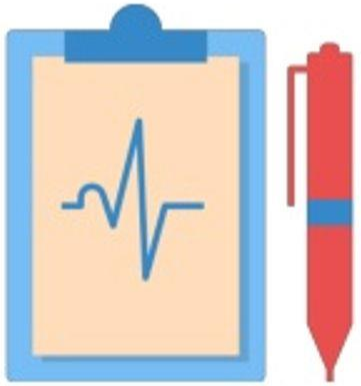
Clinic

The student should be able to **book the clinic** anywhere/ anytime.

The student **medical history** can be saved inside the cloud either by the student or the doctor.



Events

The college can **create events** and **trips** either for all the students or certain group.

The students **can join the event through the app** and **pay the fees through the smart wallet.**

Also, each of the students who joined the events can **share pictures and experience** with all the other students who attended the same event.

Communities

Student can **create special communities** for any purpose as long it **confines with the university rules.**

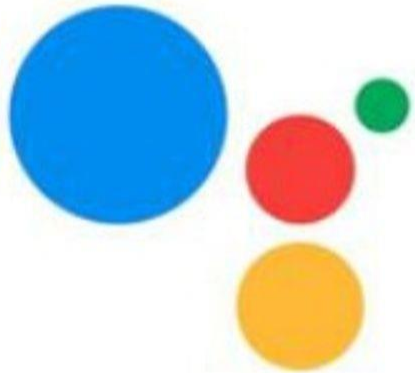
The communities also have the **same social sharing features** as the student can communicate with each other create and join events.

Even paid events can be **paid through the student smart wallet** which makes easy for the students to join and the **admins to track and manage the money** and makes it easy for the college administrators to **monitor all the activities**

Integration with Siri & Google Assistant

Hey Siri

+



Google Assistant

Each smartphone now has smart assistant either **SIRI** or **google assistant** which is supposed to improve the user experience so to help the student do everyday tasks easily there should be integration with those smart assistants through special commands.

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Employees Tasks

Staff

Every employee should be able to do all his **daily tasks** from one place so it can be tracked and logged for either **auditing or performance analysis and assessment**.

When the employee login to the system either from home or from work he **see all the tasks** he has for now **and receive a notification for each new task** or request.

Also, he can **track all that tasks through the mobile app** and even do the simple actions through the app.

Virtual Reality Learning

There should **be virtual-reality labs** in which the students can see, learn and try things they cannot do in real-life.

Special apps for each subject that will be benefited from the VR experience.

Also it should be available to **remote students outside of the lab** given that they have a VR headset.

Student Housing

All the rooms should be equipped with **Wi-Fi**, **smart lights** and **smart Air-Condition** so it can be controlled through the student app. The student can set **predefined times** to turn on and off.

Also, a gate with RFID on each door to help determine the room is empty or not for better room service times.
The room electricity only works either through the app or the student card

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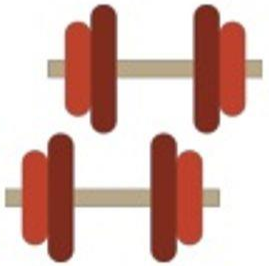
Student

Smart Wallet

It is a wallet in which the student can be **pre-charged** through various methods then can be used to **pay for the services** throughout the campus either by his Id or **online transaction** via the app.



Gym

Cafeteria

Online bookshop

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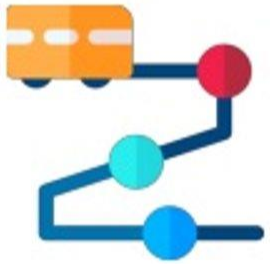
Student

Staff

Auto Parking

Once the car enters the campus it is shown the **best parking spot** near the student next lecture

The student app can remember **where the car is parked**



The cars are **tracked** throughout the campus by **RFIDs**

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Reduce the number of Human Resources

Automating manual processes

Logistic sector

- Request for the purchasing requirements.
- Request to use a car

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ERP System

Finance

- Accounting
- Auditing
- tuition fees

HR

- Human Resources
- Attendance Sys.
- Payroll Sys.

Logistics

- Purchasing request
- Stores Sys.

Clinic & pharmacy

- Reservation
- Clinic
- Pharmacy

Student & Education

Admission & Registration	Student Affairs	Education Affairs
• Online Admission	• Housing	• Questionnaire Sys.
• Admission System	• Trip Reservation	• Book & Library Sys.
• Online registration	• Student Portal	• Schedule Sys.
• Registration System	• SMS System	• Exam Schedule Sys.
• Online Admission Exam		• Academic Advising

Reduce the number of Human Resources

ERP System

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