

Al-Azhar University  
Faculty of Engineering (boys)  
Systems and Computer Engineering



جامعة الأزهر  
كلية الهندسة (بنين)  
قسم هندسة النظم والحاسبات

## Graduation Project



**Project Name : Chemistry Virtual Lab**

**A Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of Bachelor of Science  
in Systems and Computer Engineering**

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**2023**

### **Examiner Committee**

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**Date**  
6<sup>st</sup> of April, 2023

## **ABSTRACT**

A virtual chemistry lab has two point of view one is allows teachers to design experiments with help of Chemical Tools and Elements that is previously existed, second is students to carry out this experiment.

This virtual lab designed using Unity Engine

## **Requirement**

- 1- Programing Languages : C#
- 2- Game Engine : Unity Engine
- 3- Backend framework: Django

# Design Stages

## 1- Searching :

A- Chemistry Lab Components

B- Definition of a chemical experiment

C- Game Engine

## 2- UI design :

Build a imagination of what the user interface could look like using Figma:

## 3- Implementation :

A- Build Tools that will be used in experiment

B- Logical interaction between them

## **Achieved**

- 1- Searching Stage : Achieved
- 2- UI design Stage : Achieved
- 3- Implementation Stage :
  - A- Build Tools : 80% Achieved
  - B- Logical Interaction.
  - C- Teacher View: 70% Achieved

## **Future Steps**

- 1- Complete building tools
- 2- Logical Implementation
- 3- Complete Teacher View