



Cover page

Project title: ...Puppet Theater.....

Academic Year: ...2024/2025.....

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Department Name: ...Computer Engineering.....

Project Type Hardware

Supervisor Name:Dr. Suleiman Abu Kharmeh.....

Format:

- Single space, Times New Roman.
- 12 pt,
- Maximum 1 page.

Abstract Body:

Items must be provided in the Abstract:

- Why do you think this project is important? Please explain the significance of this Project in brief.
- In your point of view what are the important aspects that should be covered in the project?
- Objective(s): In your view, please explain the main objectives of the project.
- Methodology: Give a brief outline of the application development process.
- Had this project been done before?
- Are there any similar applications available today?
- **Note:** Please deliver this abstract early to ensure that your Project has been approved by the department's projects committee. **Registration will not be done without this approval.**



Project's Abstract:

Everyone has childhood memories that stay with them—whether it's a favorite sweet, a game they played, or a show they enjoyed . We decided to bring our favorite childhood memory to life again which is the puppet theatre .

A puppet theatre is a form of theatre that uses string puppets controlled by a puppeteer standing above the stage. The puppeteer controls the puppets' movements using the strings and adjusts their voice to match the story's actions and characters. However, performing the same story multiple times for different shows and standing above the stage for long periods of time can be exhausting. Additionally, traditional puppet theatre requires a skilled puppeteer to control the strings smoothly, which limits its accessibility. Since it relies on a puppeteer's presence, it cannot be performed anytime or anywhere.

This inspired us to create an automated puppet theatre that can be used anywhere, even at home. With this system, users can watch and control performances without the need for a puppeteer. To our knowledge, such a system does not yet exist.

The automated puppet theater allows you to control the movements of the puppets remotely from your device, eliminating the need for string handling and training. Additionally, you can play a fully automated story, where the puppets' movements and character voices are preprogrammed.

We will control the movements of the puppets' body parts using servo motors, and we will use another type of motors to control their movements within the theatre both right and left . An Arduino Mega will be used for overall control. In the fully automated story, the puppets' movements will be preprogrammed, and the characters' voices will be pre-recorded. For audio playback, we will use a speaker and an SD card.

Additionally, other aspects of the performance, such as theater lighting and special effects, will be pre-controlled to enhance the storytelling. These effects may include rain, fog, fans, or similar elements to create an immersive experience.

To enhance interactivity, we will integrate voice recognition, allowing the audience to use voice commands to control certain actions. For this, we will require microphones to capture the audience's input.