Cover page

Project title: ……FlexiMover…….. Academic Year: ……2024/2023……

Group Members: Shareef Nader SalahAldin 11941518……. Department Name: Computer Engineering

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Project Type **Hardware**

Supervisor Name: …Dr-Hanal Abuzant……

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?
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- **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:

This project introduces a novel robotic system designed to enhance automation and efficiency in logistics and warehousing environments. The core of this system is a robot equipped with a mechanical arm, both of which are controlled by a user-operated glove. This integration allows for precise and intuitive manipulation of objects, specifically tailored for box handling and transport tasks.

The robot's design incorporates advanced sensors and actuators to mimic the movements of the human operator's hand and arm, translating these into corresponding actions by the robot and its arm. This method of control not only aims to reduce the learning curve associated with robotic operations but also enhances the operator's ability to perform complex manipulation tasks remotely.

Our system's potential applications include but are not limited to, streamlined warehouse operations, improved efficiency in cargo handling, and safer working conditions by minimizing human involvement in potentially hazardous areas. This project combines mechanical engineering, robotics, and user interface design, presenting a forward-looking solution to modern challenges in industrial automation.