



Cover page

Project title:RootRise..... Academic Year:2025.....

Group Members:Asmaa Yahya..... Department Name: computer engineering....

.....Mira Assi.....

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Project Type Software or **Hardware**

Supervisor Name:Dr. Aladdin Masri.....

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 aims to develop a fully automated seed planting, watering, and seedling care system using CNC technology. Unlike the usual ways of planting in one big area, this system uses many small pots arranged in a grid. Each pot is treated on its own, the seeds are planted properly, and every plant gets the care it needs from the start.

The system uses a CNC machine that moves in three directions: X, Y, and Z. It will have different tool heads—one for planting seeds, one for watering, and one for checking the environment. These tools can change automatically, so the machine can do different tasks quickly and correctly.

This project is beneficial because it reduces labor and time expenditure, increases accuracy of planting, and saves water by giving each pot just the right amount. The system will use sensors to check the soil moisture and temperature. This helps it know when to water and how much water to give. While other systems like this exist, this one is special because it works with separate pots and is simple, useful, and not expensive.