Benefits of Robotic Automation Systems

The implementation of <u>robotic automation systems</u> has numerous benefits, including:

- Increased Efficiency: Robotic automation systems can perform tasks faster and with greater accuracy than humans, improving productivity and reducing labor costs.
- Improved Safety: Robotic automation systems can perform tasks that are hazardous or require high levels of precision, reducing the risk of injury or error.
- Enhanced Quality: Robotic automation systems can perform tasks with greater consistency and accuracy than humans, improving product quality and reducing defects.

Cost Savings: Robotic automation systems can reduce labor costs, improve supply chain efficiency, **Embedded Systems**

Programming Languages

C is a popular choice for embedded systems programming due to its efficiency, portability, and ease of use.

Assembly: Assembly language is a low-level language that provides direct access to hardware components.

C++ is an object-oriented language that provides a higher level of abstraction than C.

What is an embedded system?

Integrated Development Environments (IDEs): IDEs provide a comprehensive development environment for writing, debugging, and testing embedded systems code.

Compilers: Compilers translate high-level code into machine-specific code.

Debuggers: Debuggers help identify and fix errors in embedded systems code.