

SYNOPSIS

YEAR/BRANCH AND DIVISION: BE(E&TC) DIV: ----- **GROUP NO.:** 07

TITLE: “JARVIS” - Voice Assistant

OBJECTIVES:

- To Develop a user-friendly voice assistant
- To Integrate speech-to-text and natural language processing (NLP) API's
- To Enable real time integration with external API's
- To Provide a scalable framework

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INTRODUCTION:

My project, Jarvis, is a custom-built voice assistant designed using HTML, CSS, JavaScript, and various APIs. This assistant is capable of responding to user commands through voice recognition, providing a user-friendly interface for a wide range of tasks such as fetching information, controlling basic web functions, and interacting with external APIs. The project demonstrates a practical application of web technologies and showcases how front-end development can be leveraged to create interactive and intelligent systems. Jarvis aims to streamline everyday tasks, offering a seamless and intuitive user experience.

BLOCK DIAGRAM:

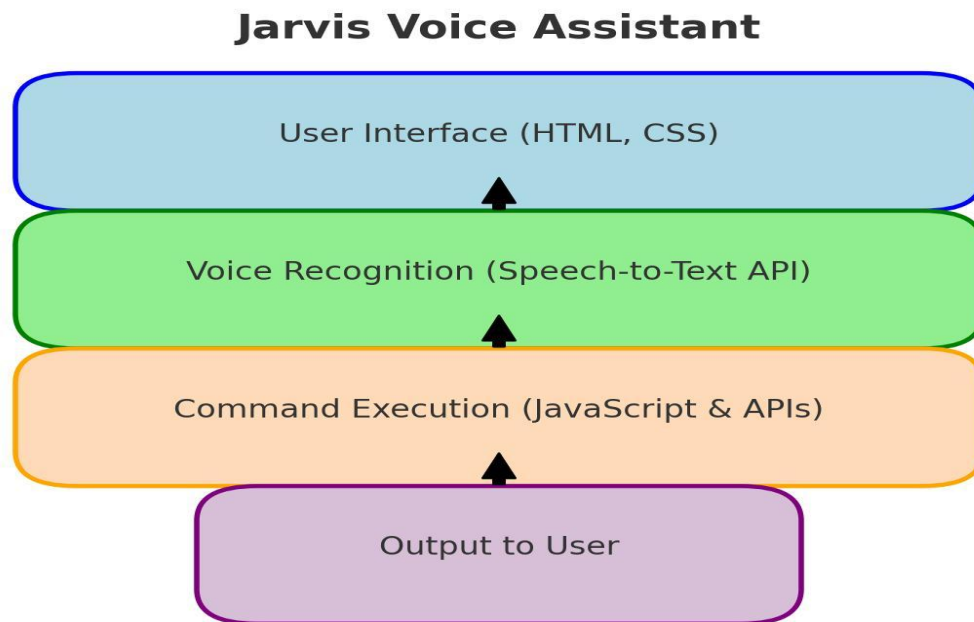


Figure 1: Block Diagram of Architecture of JARVIS

BLOCK DIAGRAM DESCRIPTION:

The diagram illustrates the structure of the Jarvis Voice Assistant project:

1. User Interface (HTML, CSS): The front-end interface where users interact with Jarvis.
2. Voice Recognition (Speech-to-Text API): Converts user speech into text for further processing.
3. Command Execution (JavaScript & APIs): Processes the voice command and interacts with external APIs to retrieve data or perform tasks.
4. Output to User: Jarvis responds with the requested information or action results, displayed on the UI.

This flow demonstrates how the system moves from voice input to output seamlessly.

ADVANTAGES & APPLICATIONS:

- **Personal Assistant:** Jarvis can be used to manage daily activities such as setting reminders, scheduling tasks, or retrieving news and weather updates.
- **Customer Support:** It can be adapted for customer service systems to answer FAQs or guide users through troubleshooting steps.
- **Smart Home Integration:** With the addition of IoT and smart device integration, Jarvis could control home appliances, lighting, and security systems using voice commands.
- **E-commerce Support:** Jarvis could assist users in browsing product catalogs, checking order statuses, or performing online purchases through voice interactions.

CONCLUSION: Jarvis Voice Assistant project showcases the power of web technologies in creating an interactive, voice-driven system that enhances user convenience by automating tasks and retrieving real-time information. Its scalable design opens up possibilities for future integration with advanced AI and IoT systems.

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