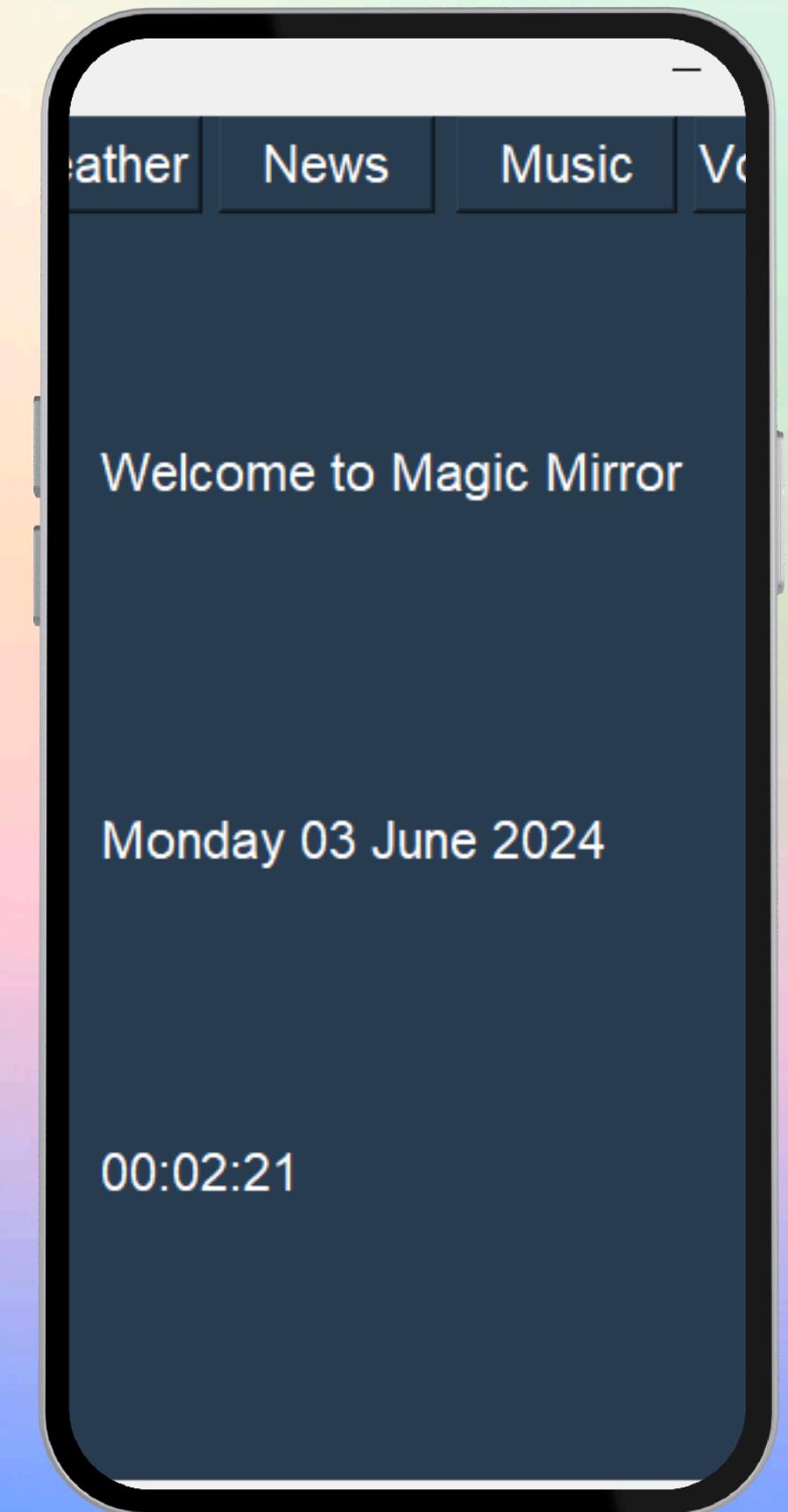


MAGIC MIRROR

Personal Digital Assistance



MAGIC MIRROR

BACK GROUND

WHAT IS PERSONAL DIGITAL ASSISTANCE?

Personal Digital Assistance (PDA) refers to AI-powered software systems that help users perform tasks through digital means, such as voice commands. Examples include virtual assistants like Alexa, Siri, Google Assistant, and Cortana. Our project, "Magic Mirror," integrates features like weather updates, news aggregation, voice interaction, and music playback.

WHY PERSONAL DIGITAL ASSISTANCE?

Convenience: PDAs enable hands-free operation, allowing users to multitask effortlessly.

Efficiency: Automates routine tasks, saving time and effort.

Smart Home Integration: Acts as a central hub for controlling smart home devices.

CHALENGES

Combining data from weather, news, and music APIs into one application.

OUR PERSONAL DIGITAL ASSISTANCE

FUNCTIONALITY

1

DISPLAY TEMPERATURE WEATHER OF CITY

Obtain website information through crawlers and display it.

2

NEWS HEADLINE

Website information ,network crawler

3

DATE INFORMATION

Obtain website information through crawlers and display it.

4

VOICE WAKE-UP & VOICE CONVERSATION

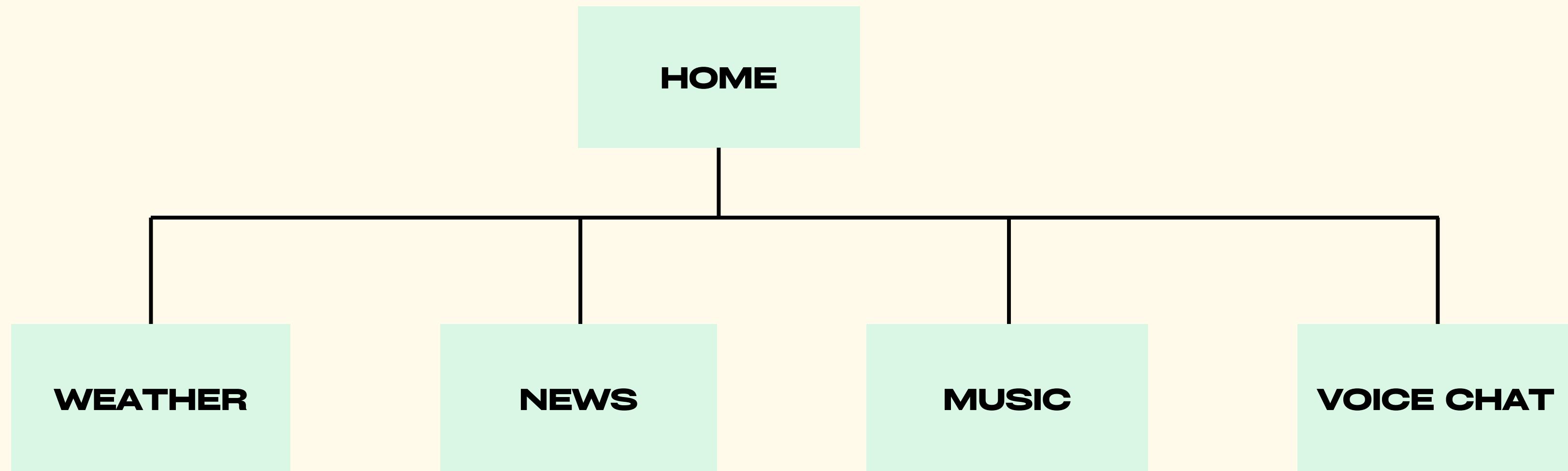
Execute the corresponding program after detecting a specific voice

5

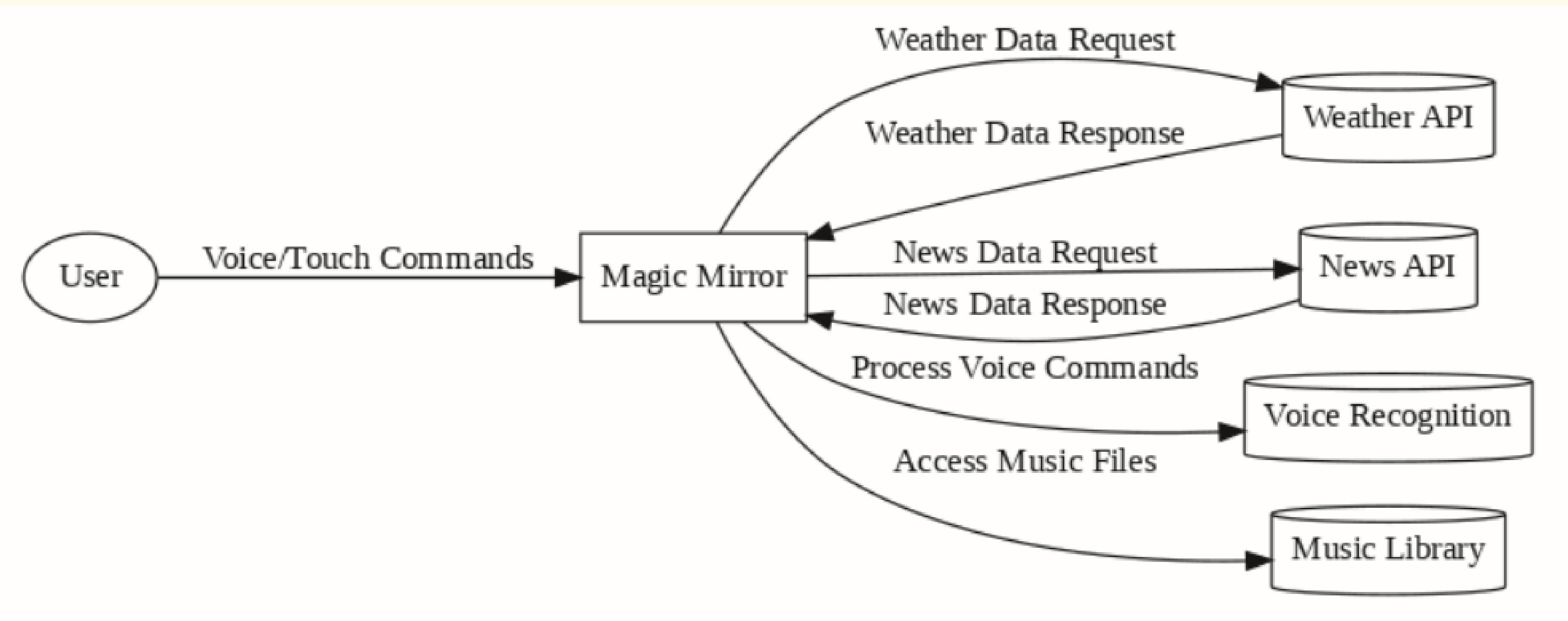
MUSIC

Control music playback with voice

Architecture



Architecture



Key Technologies Used

Python Libraries:

Requests



SpeechRecognition



Pygame

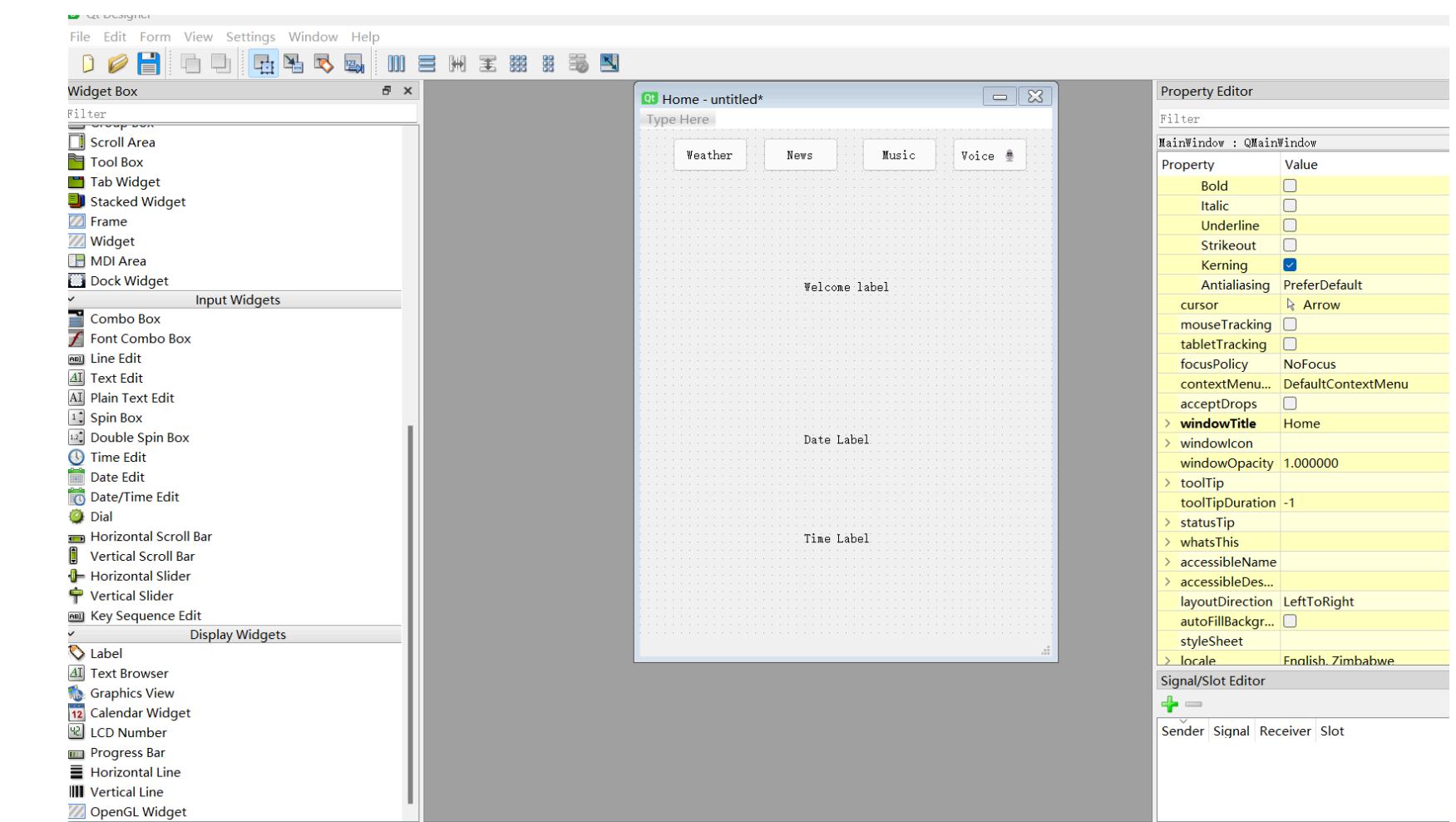


PyQT5

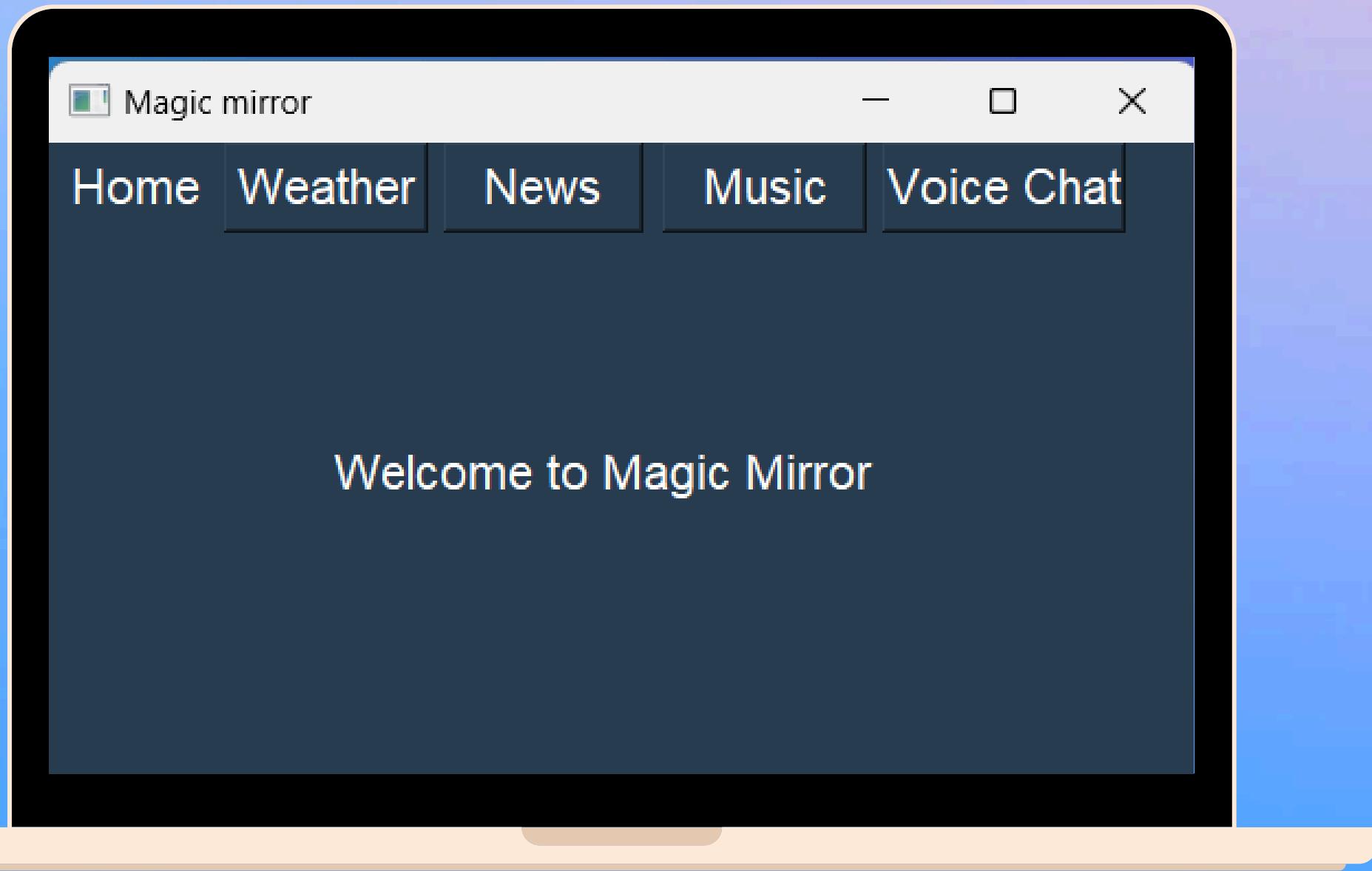


Design

We used python's pyQt5 to implement interface drawing, divide the position of each information display, and set the layout method, font and font size, etc.



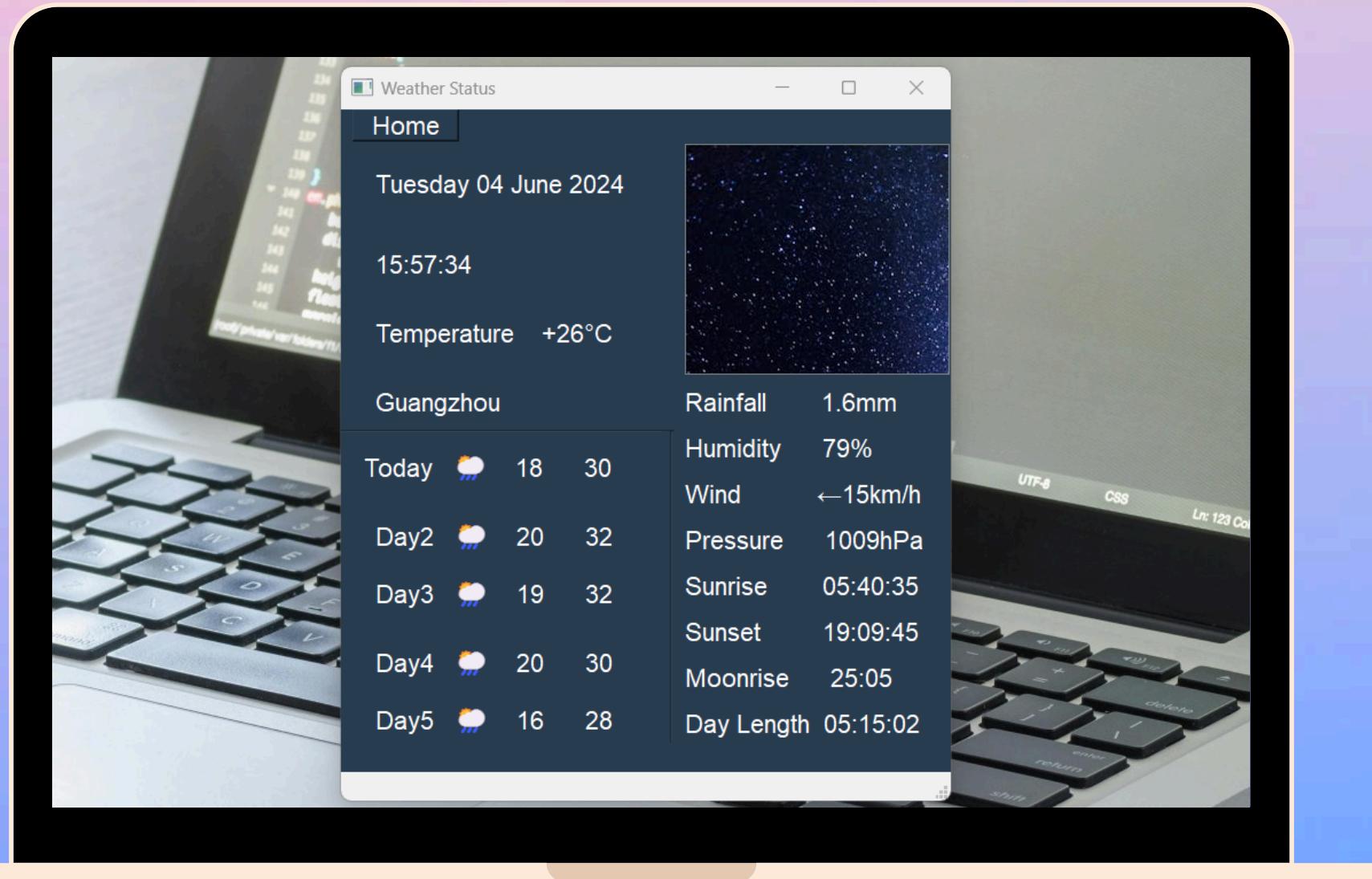
HOME



The central hub of the Magic Mirror application.

- Functionality: Displays the current date and time, with navigation buttons to access Weather, Music, News, and Voice Chat features.
- Functionality: Displays the current date and time, with navigation buttons to access Weather, Music, News, and Voice Chat features.
- All other features are accessed through the home page, providing a unified user experience.

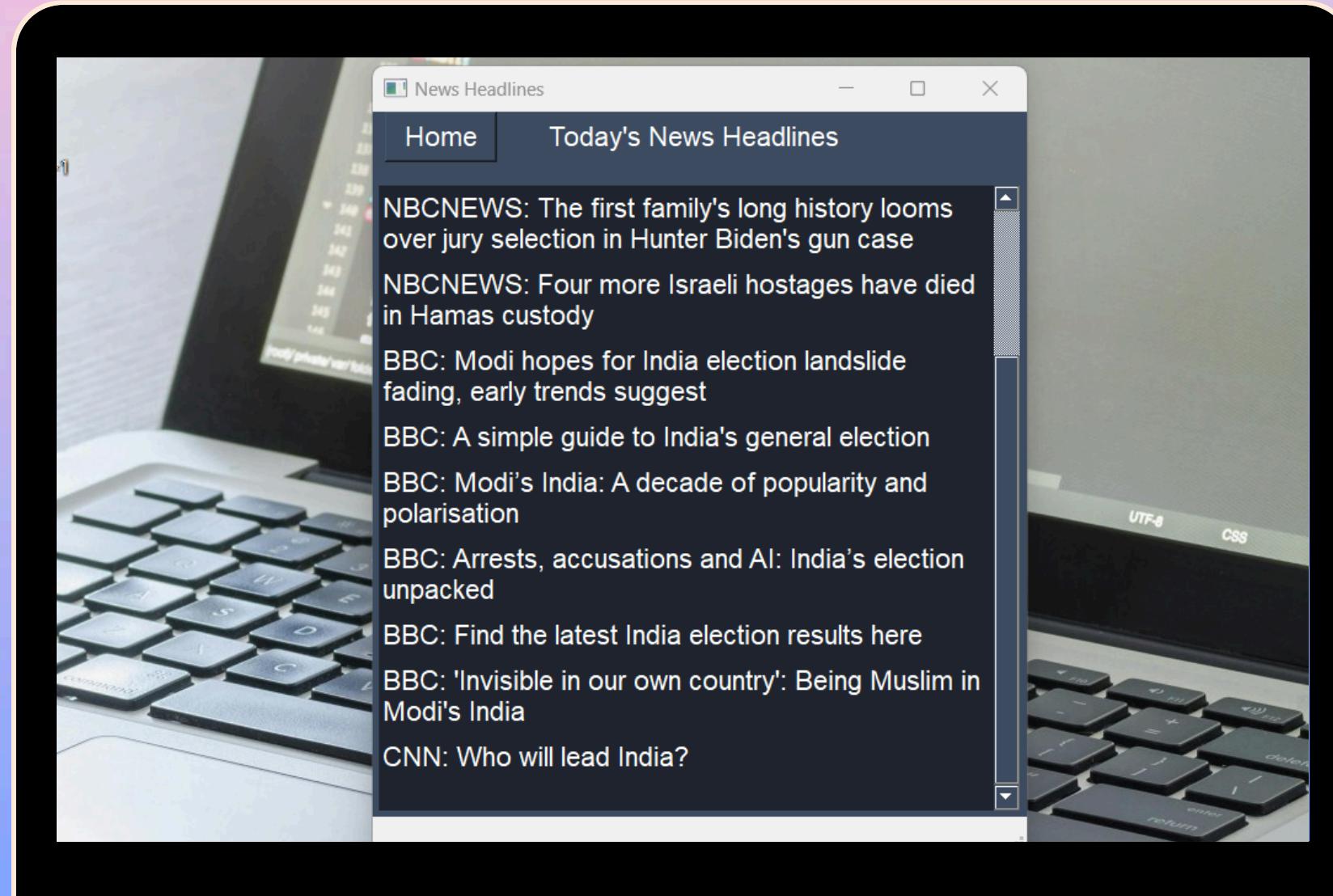
WEATHER



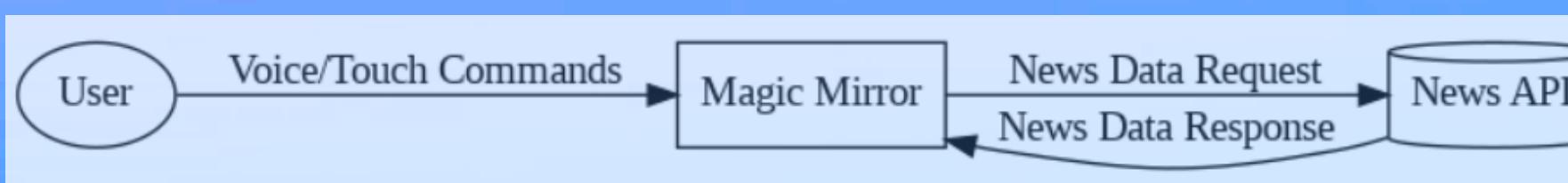
- Fetches data from <https://ipinfo.io/weather> APIs and displays it using clear, simple icons and text.
- Shows current temperature, humidity, and forecasts. Real-time updates ensure accurate information.
- Accessible from the home page and returns to it with a simple button click.



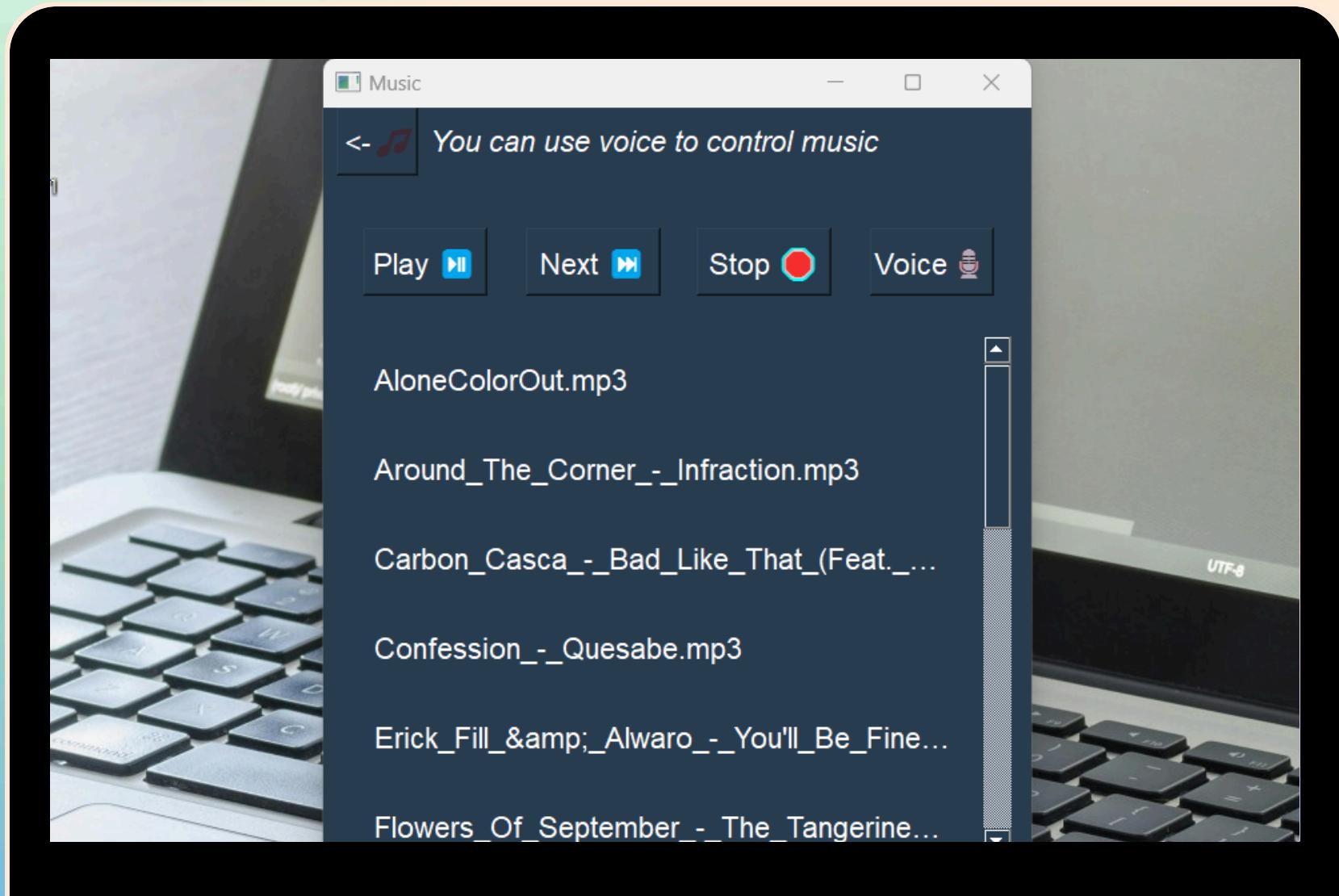
NEWS



- Uses Requests/web crawling to fetch headlines from multiple sources and displays them in a scrolling format.
- Aggregates and displays the latest news headlines.
- Easy access from the home page with a return button for seamless navigation.



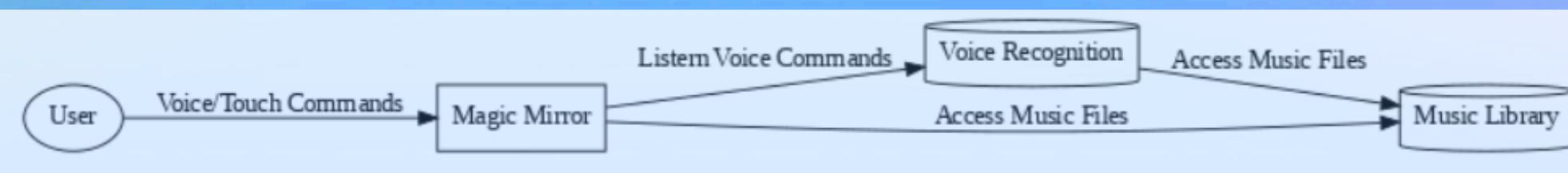
MUSIC



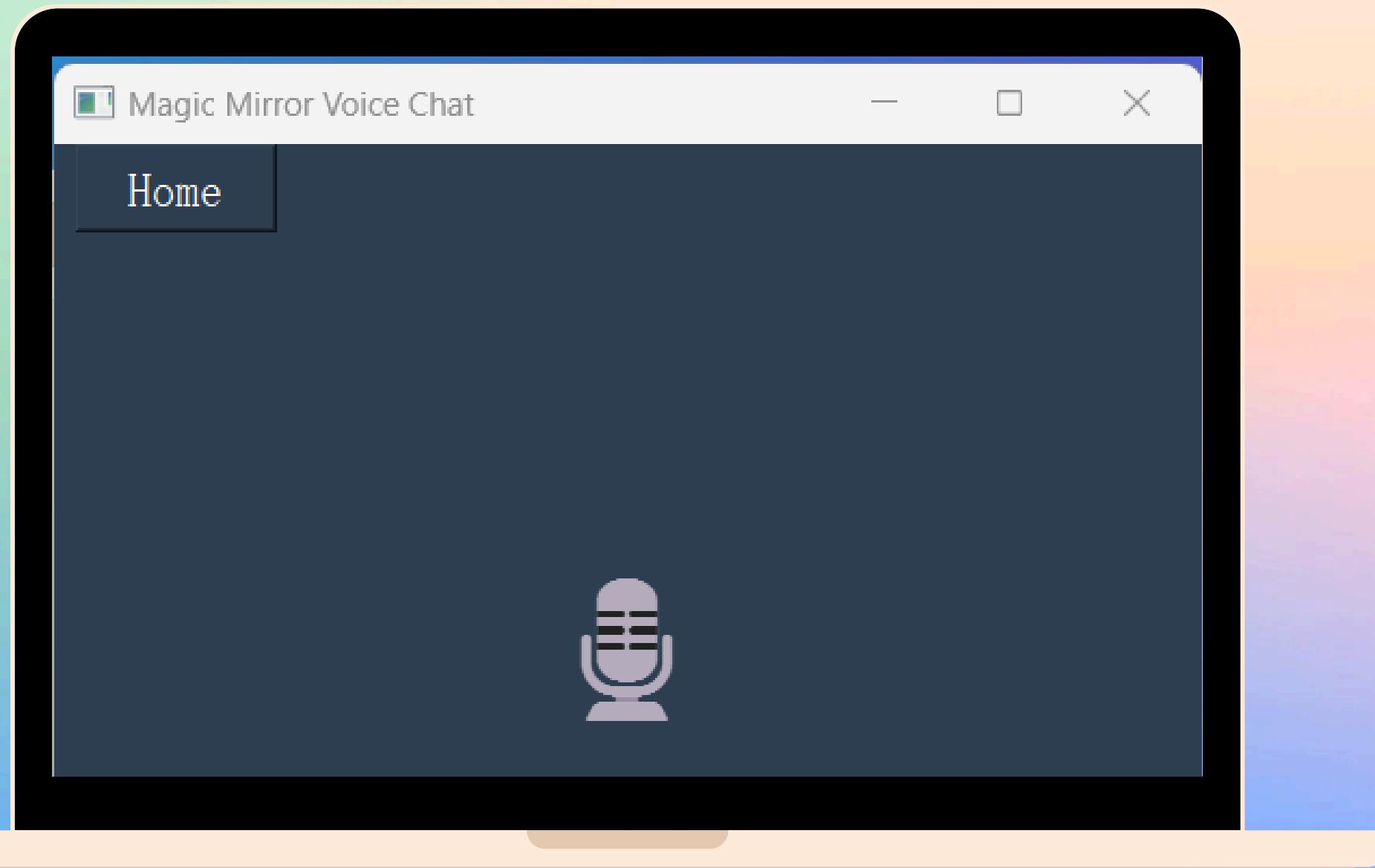
- Controls music playback with intuitive buttons and voice commands.

- Utilizes Pygame for audio playback and integrates with local music libraries.

- Features play, pause, skip, and stop controls. Displays current track information and supports voice commands.t.



VOICE & CHAT

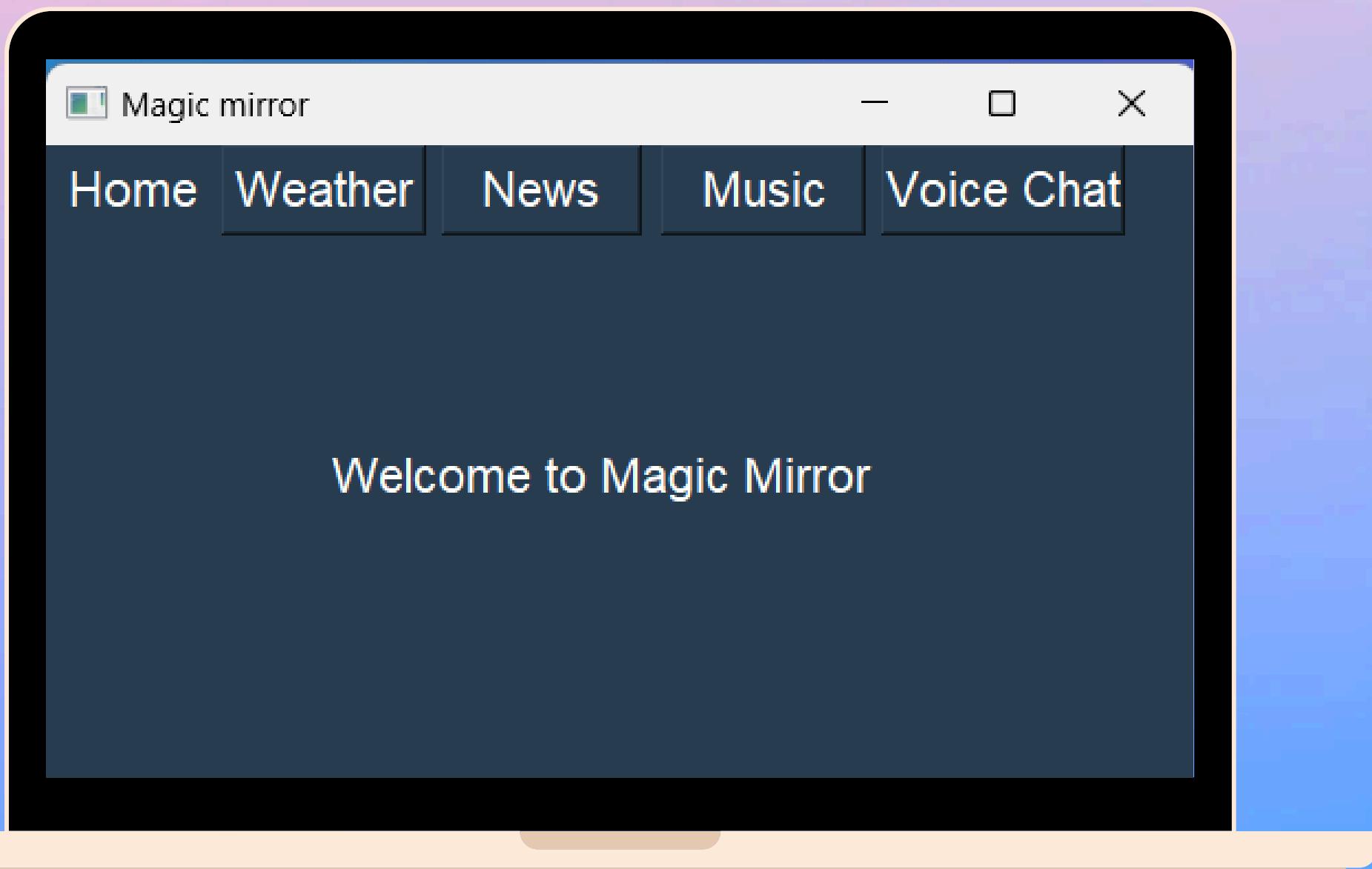


- Uses SpeechRecognition and Google Web Speech API to process voice commands.
-

- Users can control other features, like music, using voice commands. Provides immediate feedback through command execution and visual indicators.
-

- Initiated from the home page and easily interacts with all other features, enhancing accessibility and ease of use.

TESTING



As a music lover, Myxeria is a great way to discover new music.

I love this app! Musicians that I can't find anywhere else are here!

I love supporting indie bands and Myxeria helps me do that.

MAGIC MIRROR

FUTURE DIRECTIONS

1. Voice Recognition and AI Integration

- Improve accuracy and expand language support.
- Integrate AI algorithms for predictive capabilities and personalized interactions.

2. Enhanced Weather Updates

- Utilize advanced algorithms and machine learning for more accurate predictions.
- Incorporate additional environmental data such as air quality and pollen levels.

3. Advanced Music Playback

- Integrate more streaming services.
- Enhance listening experience with technologies like spatial audio and surround sound.

CONCLUSION

- Our app integrates modern technology by combining voice recognition, web scraping, API integration and Music.
- Our app demonstrates practical applications of technology in daily life.
- Our app shows the power of Enhanced Functionalities that provide real-time information that keep user informed and aids in daily decision-making.
- Our app highlights the potential for future advancements and personalized interactions.

[TRY MAGIC MIRROR FOR FREE](#)

Thank you!