

```
import sys
import requests
from PyQt5.QtWidgets import (
    QApplication,
    QMainWindow,
    QLabel,
    QLineEdit,
    QPushButton,
    QVBoxLayout,
    QWidget
)

from PyQt5.QtGui import QFont


class WeatherApp(QMainWindow):
    def __init__(self, api_key):
        super().__init__()

        # Initialize the WeatherApp with the provided API key

        self.api_key = api_key

        # Set the window properties
```

```
self.setWindowTitle("Weather App")
self.setGeometry(200, 200, 350, 250)

# Create a vertical layout to organize the widgets

layout = QVBoxLayout()


# Create a font for labels and input fields

font = QFont("Arial", 12)


# Create and configure the location input field
self.location_label = QLabel("Enter Location:", self)
self.location_label.setFont(font)
layout.addWidget(self.location_label)


# Create an input field for entering the location
self.location_input = QLineEdit(self)
self.location_input.setFont(font)
layout.addWidget(self.location_input)


# Create labels for displaying weather information
self.result_label = QLabel("", self)
self.result_label.setFont(font)
layout.addWidget(self.result_label)


self.humidity_label = QLabel("", self)
self.humidity_label.setFont(font)
layout.addWidget(self.humidity_label)


self.wind_label = QLabel("", self)
```

```
self.wind_label.setFont(font)
layout.addWidget(self.wind_label)
```

```
self.visibility_label = QLabel("", self)
self.visibility_label.setFont(font)
layout.addWidget(self.visibility_label)
```

Create a button to trigger weather data retrieval

```
self.search_button = QPushButton("Search", self)
self.search_button.setFont(font)
self.search_button.clicked.connect(self.get_weather)
layout.addWidget(self.search_button)
```

Create a central widget and set the layout for the main window

```
central_widget = QWidget(self)
central_widget.setLayout(layout)
self.setCentralWidget(central_widget)
```

```
def get_weather(self):
```

Retrieve the location entered by the user

```
location = self.location_input.text()
```

Construct the API URL for weather data retrieval

```
api_url
```

=

```
f"http://api.worldweatheronline.com/premium/v1/weather.ashx?key={self.api_key}&q={l
ocation}&format=json&num_of_days=1"
```

Send a request to the weather API and get the response

```
response = requests.get(api_url)
```

```
data = response.json()
```

Extract and display weather information if available

```
if "data" in data and "current_condition" in data["data"]:
```

```
    weather_data = data["data"]["current_condition"][0]
```

```
    temperature = weather_data["temp_C"]
```

```
    description = weather_data["weatherDesc"][0]["value"]
```

```
    humidity = weather_data["humidity"]
```

```
    wind_speed = weather_data["windspeedKmph"]
```

```
    visibility = weather_data["visibility"]
```

```
result_text = f"Weather: {description}, Temperature:
{temperature}°C"humidity_text = f"Humidity: {humidity}%"
wind_text = f"Wind Speed: {wind_speed}
km/h"visibility_text = f"Visibility:
{visibility} km"
else:

result_text = "Weather information not available for this location"
humidity_text = ""
wind_text = ""
visibility_text = ""
```

```
# Update the labels with the retrieved weather
informationself.result_label.setText(result_text)
self.humidity_label.setText(humidity_text)
self.wind_label.setText(wind_text)
self.visibility_label.setText(visibility_text)
```

```
if __name__ == "__main__":
```

```
# Provided API key for accessing weather data
```

```
api_key = "274a6cd71d1945e3a0c62114232410"
```

```
# Create a PyQt application, the WeatherApp instance, and show the main
window
```

```
app = QApplication(sys.argv)
```

```
weather_app =
```

```
WeatherApp(api_key)
```

```
weather_app.show()
```

```
# Run the application and event loop
```

```
sys.exit(app.exec_())
```