

## React Weather App Core Concepts Explained Simply

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What does `setData(...)` do?

It saves the current weather info (like temperature, wind, humidity).

Think of it like this:

Someone tells your app the weather. You store that paper in a box labeled "data" using `setData()`.

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What does `setLocation(...)` do?

It saves what the user types in the search box (like "New York").

Think of it like this:

As the user types letter by letter, you write it down with `setLocation()`. "N" "Ne" "New York".

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What does `setLocationInfo(...)` do?

It saves extra info about the location name, country, and coordinates.

Think of it like this:

After asking where "London" is, you write down its map info (lat/lon) using `setLocationInfo(info)`.

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What does `setForecastData(...)` do?

It saves the weather forecast for the next 5 days.

Think of it like this:

You ask, What's the weather this week? You store the answers in a list using `setForecastData(list)`.

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What does `onChange` do?

It runs whenever the user changes the text in the input box.

Think of it like this:

Each time the user types or deletes a letter, `onChange` saves the new text using `setLocation(value)`.

Example:

You type "New Y" `onChange` runs and saves `location = "New Y"`

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What does `onKeyDown` do?

It runs whenever the user presses any key (like Enter, A, Space).

Think of it like this:

You're listening for a key press. When you hear "Enter", you say "Okay, fetch the weather!"

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In your code:
onKeyDown={searchLocation}
Inside that function:
if (event.key === "Enter") { ... }
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Summary Table

Function / Event	What it does
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setData	Saves the current weather info
setLocation	Saves what the user types in the input
setLocationInfo	Saves map info (lat/lon, country) for the city
setForecastData	Saves the 5-day forecast
onChange	Runs whenever the input changes (each keystroke)
onKeyDown	Runs whenever any key is pressed (used to check for Enter key)

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How do the setSomething(...) functions work?

- Each set function:
1. Saves new info
  2. Updates its matching variable (like data, location, etc.)
  3. React sees the change and refreshes the screen

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Heres what each one does:

Function	Saves info to...	Then you can use...
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setData(...)	updates data	data.main.temp, data.weather, etc.
setLocation(...)	updates location	location (for search or API call)
setLocationInfo(...)	updates locationInfo	locationInfo.name, locationInfo.country
setForecastData(...)	updates forecastData	forecastData.map(...) for 5-day cards

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Think of it like this:

- setData(weather) Put this weather info into the data box.
- setLocation("Paris") Write Paris in the location box.
- setForecastData(list) Store this 5-day list for display.
- React will auto-refresh the screen when these change.

Final summary:

Use setXYZ(...) to save new info.

React updates the matching variable.

And the screen refreshes with the new values!