

# Lesson 16

## Prototyping Online Components Weather Web APIs for usage in a Phone

# Weather Application UIs, APIs and web API interactions

- Number of APIs can be mashed to get a the desired Web Application
- Most mobile phones have Weather Web Application
- Weather Application UIs, APIs and web API interactions, and ten sequences of message exchanges.

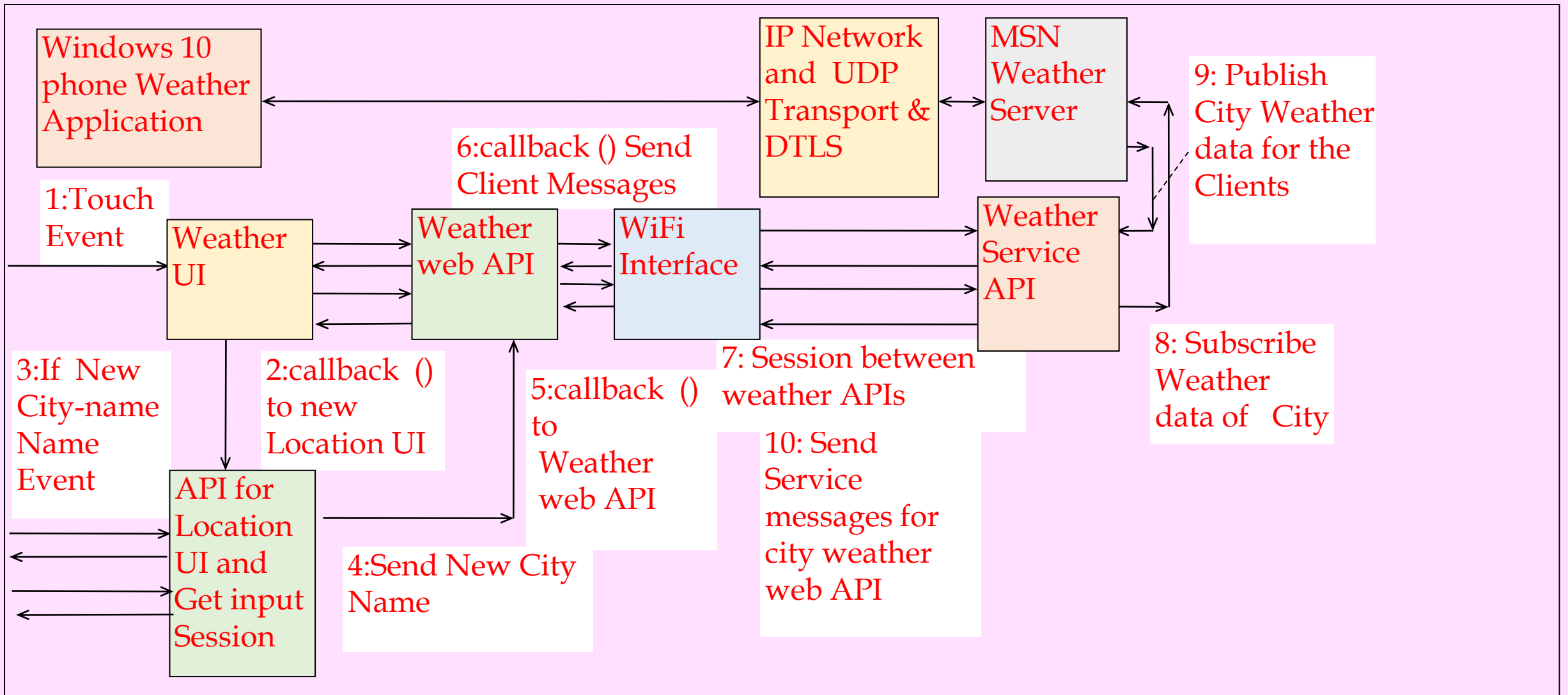


Fig. 9.4 Mobile phone, weather Application UIs, APIs and web API interactions, and ten sequences of message exchanges..

## Example 9.13

- A weather-application needs to access the weather-service in a mobile phone
- Using API, web API and mashing of APIs

# Weather web Application at Phone

- Using number of APIs and callback functions
- Location API gets the name of the city from location server. (Sequences 3 and 4).
- The weather web-API callback functions interact with a weather API for the weather service messages.
- The API subscribes to MSN or other Weather Server. The server publishes weather messages for the subscribing clients (Sequence 5 to 8).

## Example 9.13 weather-application in the phone

- Uses a UI (a screen API) which displays onto screen to seek
- user input
- Sequential actions:
- When user touches ‘weather’, the touch messages transfer to another UI (User Interface) which appears
- next onto the screen (Sequences 1 and 2 in the Figure 9.4).

## Example 9.13 Weather UI and web Application

- If the weather UI is touched, then callback function initiates another API
- The called API UI is full screen, which shows full details of the weather at selected city.
- When user touches the UI screen, then the weather messages refresh.
- The weather web application at the phone is using number of APIs and callback functions.

## Example 9.13 Location API

- Weather gets input for the name of city (Sequences 3 and 4)
- When input is given then it callback a back-end code for weather access
- The code accesses to the weather site using Internet over WiFi network to which phone is connected



## Example 9.13 Weather Web API

- Weather web-API callback functions interact with weather-API for service for weather service messages.
- Subscription to a Weather Server
- The server publishes weather messages for the subscribing clients (Sequences 5 to 7)

## Example 9.13 Weather Service API

- Weather service API sends service messages as response
- Response communicates over Internet to the weather client of weather web API
- The service also sends in response presence and next two days predications, and expected maximum and minimum temperatures (Sequence 8 to 10).

# Summary

## We learnt

- An API is a way of obtaining input from one face and sending the request/message/data to another face (other set of codes).
- The API enables initiations of events, obtaining inputs, execution of application codes (set of codes) on input events and running the functions (callback functions) on input event. Web API is an API which uses web protocols for web applications.

# Summary

We learnt

- Example of weather application in a mobile phone shows the uses of APIs and web APIs.

End of Lesson 16 on  
Prototyping Online Components Weather Web  
APIs for usage in a Phone