Initialize WiFi credentials and sensor pin assignments
Initialize light and fan pin assignments and states
Initialize DHT sensor and WiFi server
Initialize other variables for tracking state and timing

Setup:

Begin Serial communication

Set light and fan pins as output and turn them off

Set sensor pins as input

Start WiFi access point

Print IP address

Begin DHT sensor

Start the WiFi server

Loop:

Check for a client connection to the server

If a client is connected:

Record the current time and reset the previous time

Print a message indicating a new client connection

Initialize an empty string for the current line

While the client is connected and timeout has not occurred:

If the client has sent data:

Read the data

Print the data to Serial

Append the data to the header string

If a newline character is received:

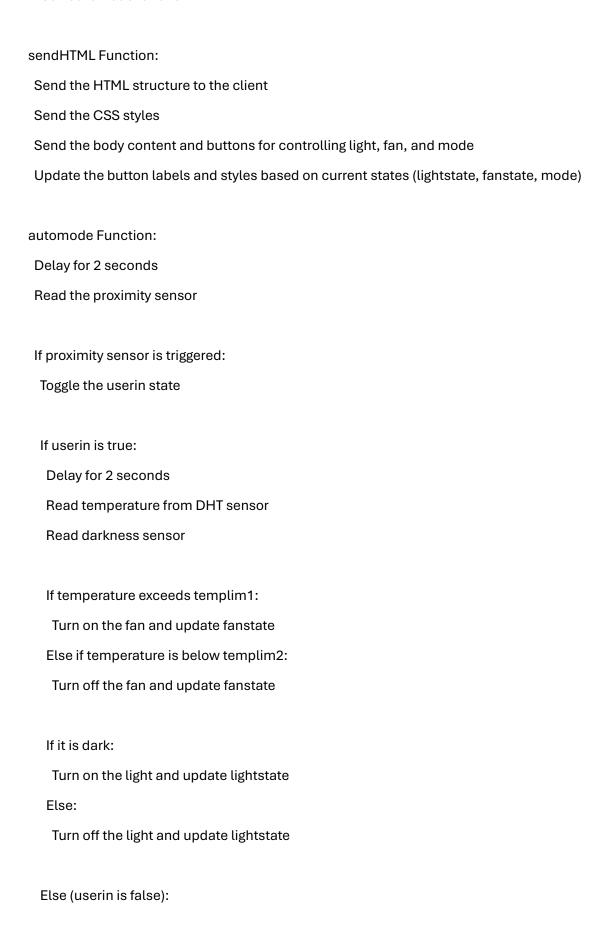
If the current line is empty (end of HTTP request):

Send the HTTP response header

Call sendHTML function to send the HTML page

If the mode is manual:
If the header contains "GET /light/on":
Turn on the light and update lightstate
Else if the header contains "GET /light/off":
Turn off the light and update lightstate
If the header contains "GET /fan/on":
Turn on the fan and update fanstate
Else if the header contains "GET /fan/off":
Turn off the fan and update fanstate
If the header contains "GET /mode/manual":
Set the mode to manual
Else if the header contains "GET /mode/auto":
Set the mode to auto
Break out of the loop
Else:
Clear the current line
Else if the character is not a carriage return:
Append the character to the current line
Clear the header string
Stop the client connection
Print a message indicating the client disconnected
If the mode is auto:

Call automode function



Turn off the light and fan

Update lightstate and fanstate