Guide to Set Up Doorbell Based on Blynk IoT

An alternative implementation of the Doorbell utilises Blynk IoT instead of IFTTT. Consider the following advantages and disadvantages, and exercise discretion before deciding to use Blynk IoT:

Blynk IoT offers highly reliable services with minimal delay to push notifications. Its response time for notifications is typically < 2 seconds as compared to ~15 seconds or even lost notifications through IFTTT. However, the free subscription plan limits users to 100 notifications per devices per day (maximum two devices per Blynk account). The set-up process for Blynk IoT is also more intricate than that of IFTTT and requires compiling and uploading of code.

Create the Blynk Template

Step 1

In your desktop browser, go to https://blynk.io/ ➲ create an account

Step 2

In your desktop browser, return to https://blynk.io/ and log in ➲ Under the "Search" page, "+ New Template" ➲ Under "NAME" enter "Doorbell; under "HARDWARE" select "ESP8266"; under "CONNECTION TYPE" select "WiFi"; click "Done".

Step 3

You will be directed to the "Templates" page. Under "Events" tab, "+ Add New Event" ➲

You will be directed to "General" sub-tab. Under "EVENT NAME" enter "Knock knock!"; Under "Event will be sent to user", select "1 second"; Check both "Send event to Notifications tab" and "Send event to Timeline" ➲

Go to the "Notifications" sub-tab and check "Enable notifications"; Under "PUSH NOTIFICATIONS TO" select "Device Owner"; Check both "Deliver push notifications as alerts" and "Enable notifications management"; click "Create" ➲ Click "Save" on the top right of the page.

Step 4

Under the "Templates" page, click "Doorbell" ➲ Click within the dark box to copy the two lines of code containing "BLYNK_TEMPLATE_ID" and "BLYNK_DEVICE_NAME".

Keep these on your clipboard as you will need to paste these two lines into the Arduino code later.

Upload Arduino Code into the Doorbell

Before You Begin
Connect the Doorbell to your desktop using a USB cable (do not plug it into the mains at this point). ➲ In Windows, go to the Device Manager and look for "USB-SERIAL CH-340" under Ports. ➲

If this is missing but you see an unknown device in Device Manager, you will need to install the CH-340 driver. Google for further instructions.

(Perform the equivalent steps if using a Mac.)

Step 1
In your desktop browser, go to https://www.arduino.cc/en/software to download Arduino IDE ➲ Complete the installation and launch Arduino IDE ➲ Under "File" menu, select "Preferences ➲ Under "Additional Boards Manager URLs", type http://arduino.esp8266.com/stable/package_esp8266com_index.json ➲ Click "Ok" ➲

Under "Tools" menu, select "Board", "Boards Manager" ➲ Search for "esp8266" and install "esp8266 by ESP8266 Community".

Step 2
Launch the file "Edgent_ESP8266.ino" (provided with your order) in Arduino IDE ➲ Replace the two lines of code containing "BLYNK_TEMPLATE_ID" and "BLYNK_DEVICE_NAME" with the two lines earlier copied into the clipboard

Step 3
Under the "Tools" menu, select "Board" ➲ "ESP8266 Boards" ➲ "NodeMCU 1.0"

Step 4
Under the "Tools" menu, select "Manage Libraries" ➲ Search for "Blynk" by a "Volodymyr Shymanskyy" and install the latest version

Step 5
Under the "Tools" menu, select "Erase Flash" ➲ "All Flash Contents"

Step 6
Under the "Sketch" menu ➲ "Upload"

Install and Configure Blynk IoT App in your Mobile Device

Step 1
Download and install the Blynk IoT app in your Android or iOS mobile device ➲ Log into the app

Step 2
On the main page, click "+ Add New Device" ➲ "Find devices nearby" ➲ "Start" ➲ "Continue" ➲ select the WiFi network named "Blynk Doorbell-xxxxx"

Step 3
Follow on-screen instructions to connect your Doorbell to the strongest WiFi hotspot available ➲

Before you click "Finish", you may wish to delete the last six characters (inclusive of the space) appended to your device name for stylistic purpose, as this name will appear in all pop-up push notifications when you use the Doorbell. I.e. shorten "Doorbell xxxxx" to "Doorbell" ➲

"Finish"!

WiFi Provisioning for Change of WiFi Hotspot

Along the way, you may need to change the WiFi Hotspot to which the Doorbell is connected. Follow these instructions to do so:

Step 1
Launch the file "Edgent_ESP8266.ino" (provided with your order) in Arduino IDE.

Step 2
Under the "Tools" menu, select "Erase Flash" ➲ "All Flash Contents"

Step 3
Launch Blynk IoT in your mobile device ➲ in the main page click "Doorbell" ➲ click on the ⋮ three dots at top right hand corner of screen ➲ again, click on the ⋮ three dots at top right hand corner of screen again ➲ "Reconfigure" ➲ "Yes" ➲ "Start" ➲ "Continue" ➲ select the WiFi network named "Blynk Doorbell-xxxxx"

Step 4
Follow on-screen instructions to connect your Doorbell to the strongest WiFi hotspot available ➲ "Finish"
