<div align="center">

Ex.No:- 2

IoT for smart home application

</div>

OBJECTIVES

The method of regulating house appliances automatically utilizing various control system approaches is known as IoT home automation. Various control mechanisms may be used to regulate electrical and electronic equipment in the house, such as windows, refrigerators, fans, lights, fire alarms, kitchen timers, and so on.
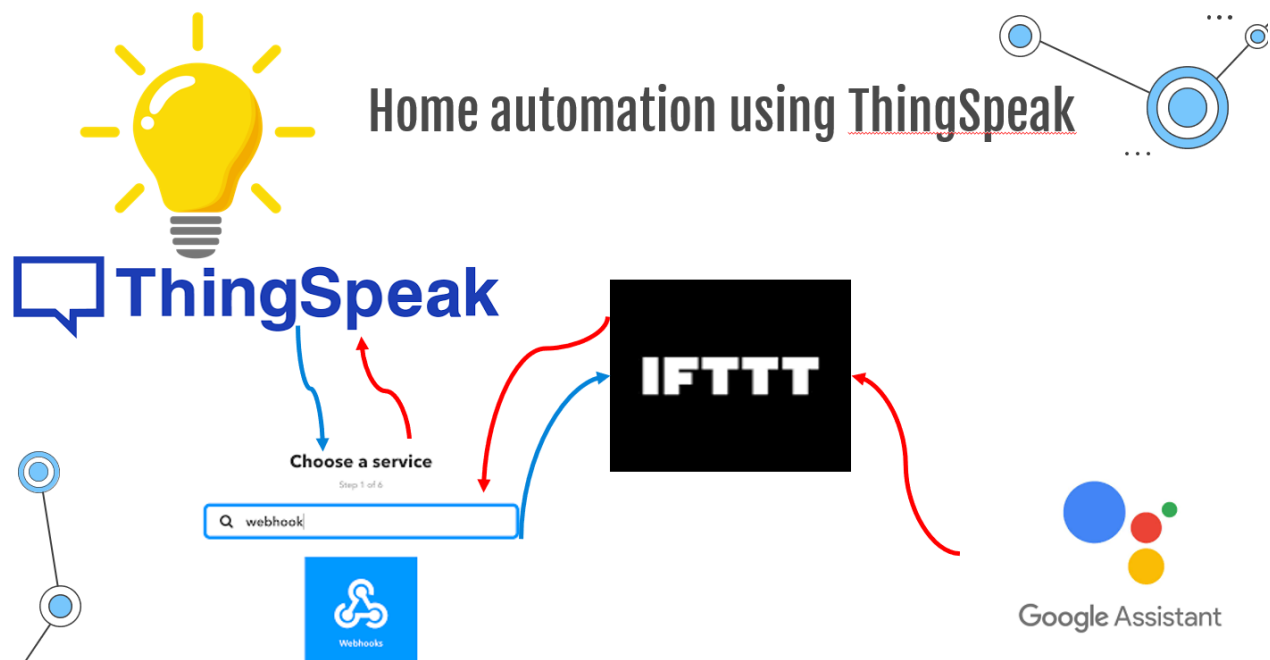
PROCEDURE:

Step 1:

1. **Create a channel in the Thingspeak, to read a field data.**

2. **Using Add widgets, add lamp indicator for the field 1 data and configure the widget parameter as shown below.**

Configure widget parameters   ? ×

Name   lamp

Condition   If

Field 1 ▾

is equal to ▾

1

turn Lamp ON

Update Interval   15   second(s)

Color   🟩

Create   Cancel

Author: mwa0000024881606
Access: Private

Private View   Public View   Channel Settings   Sharing   API Keys   Data Import / Export

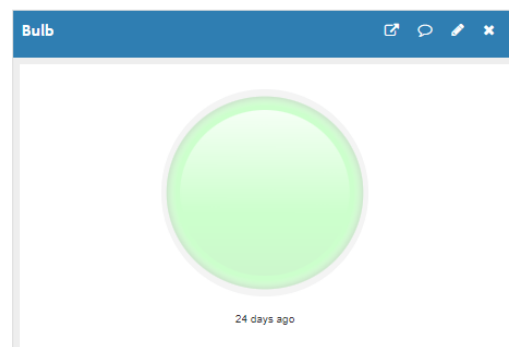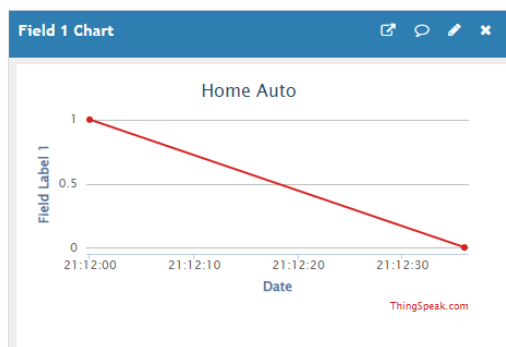➕ Add Visualizations   ➕ Add Widgets   ↗ Export recent data   MATLAB Analysis   MATLAB Visualization

Channel 1 of 3 ‹ ›

Channel Stats

Created: 23 days ago
Last entry: 23 days ago
Entries: 2

Field 1 Chart   ↗ 💬 ✏ ✖

Home Auto

Bulb   ↗ 💬 ✏ ✖

24 days ago

---

3. **From the API keys use write channel feed URL to turn ON or OFF the lamp**

ON: https://api.thingspeak.com/update?api_key=83MJC2KXXXX0GXII&field1=1
OFF: https://api.thingspeak.com/update?api_key=83MJC2KXXXX0GXII&field1=0

Write API Key

Key: 83MJC2KUHXC0GXII

Generate New Write API Key

Read API Keys

Key: IFVB4X7U8IGMLSBY

Note:

Save Note   Delete API Key

Add New Read API Key

Help

API keys enable you to write data to a channel or read data from a private channel. API keys are auto-generated when you create a new channel.

API Keys Settings

- Write API Key: Use this key to write data to a channel. If you feel your key has been compromised, click Generate New Write API Key.
- Read API Keys: Use this key to allow other people to view your private channel feeds and charts. Click Generate New Read API Key to generate an additional read key for the channel.
- Note: Use this field to enter information about channel read keys. For example, add notes to keep track of users with access to your channel.

API Requests

Write a Channel Feed

GET https://api.thingspeak.com/update?api_key=83MJC2KUHXC0GXII&field1=0

Read a Channel Feed

GET https://api.thingspeak.com/channels/2404464/feeds.json?api_key=IFVB4X7U8IGMLSE

Read a Channel Field

GET https://api.thingspeak.com/channels/2404464/fields/1.json?api_key=IFVB4X7U8IG
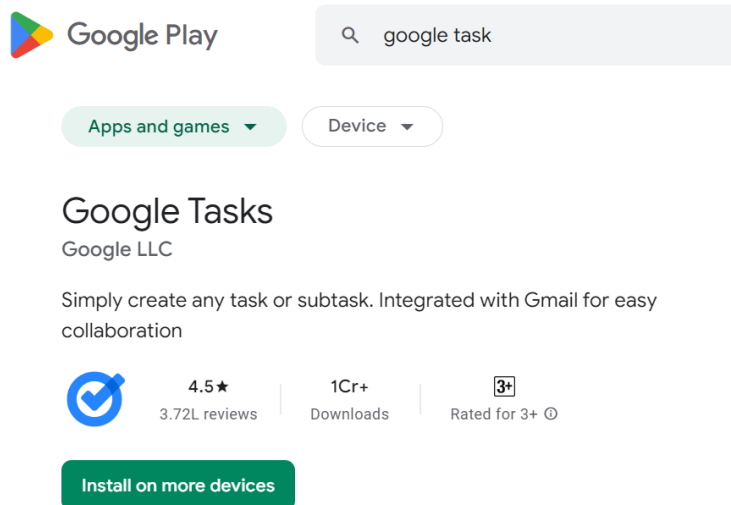
Read Channel Status Updates

GET https://api.thingspeak.com/channels/2404464/status.json?api_key=IFVB4X7U8IGHL

Note: Since we are using free version we can use only one automation command at a time. Hence, let the lamp be in OFF position
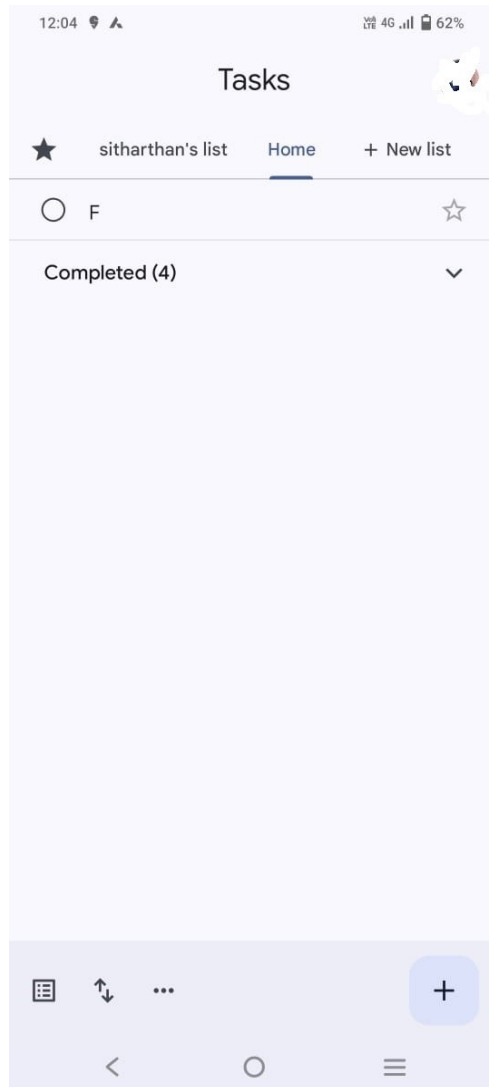
OFF: https://api.thingspeak.com/update?api_key=83MJC2KXXXX0GXII&field1=0

Step 2:

1. Download and install google tasks from play store (Iphone users from APP store)

Google Play

google task

Apps and games ▾   Device ▾

Google Tasks
Google LLC

Simply create any task or subtask. Integrated with Gmail for easy collaboration

4.5★
3.72L reviews

1Cr+
Downloads

3+
Rated for 3+ ⓘ

Install on more devices

2. Click on new list to create task list and Name them as Home or any user defined.
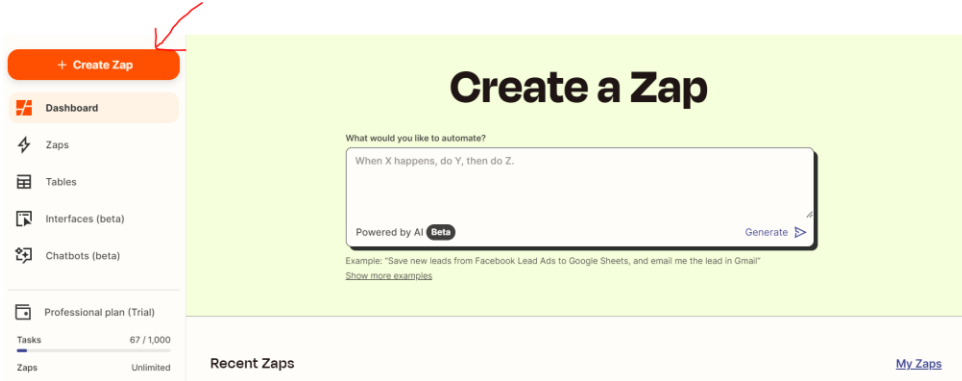
Step 3:

1. **Open Zapier using the URL-** https://zapier.com/
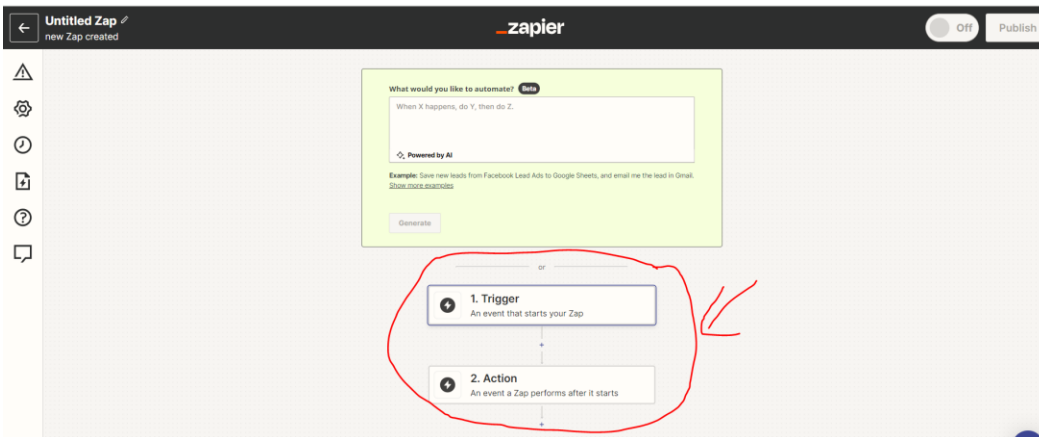2. Click on Start free with google, use your google login id to start with.
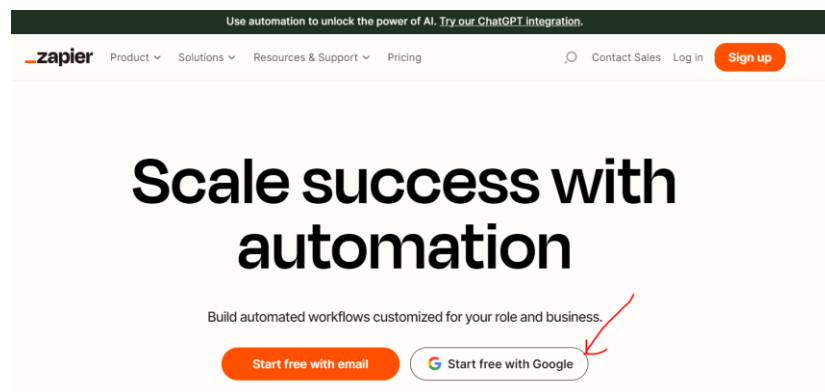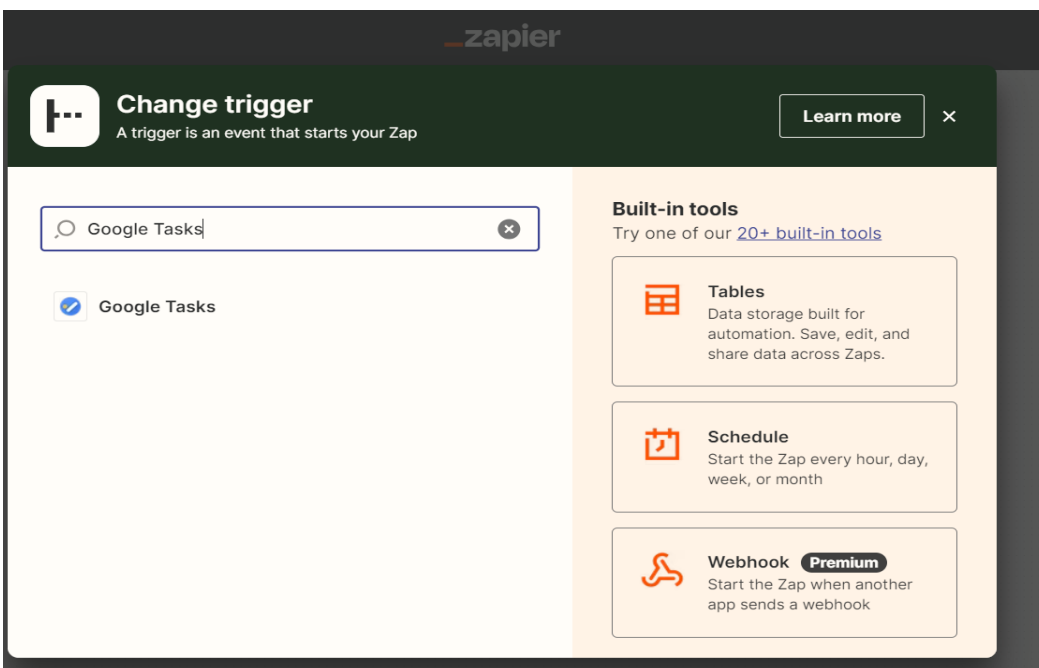
3. Click on Create Zap to create automation project.
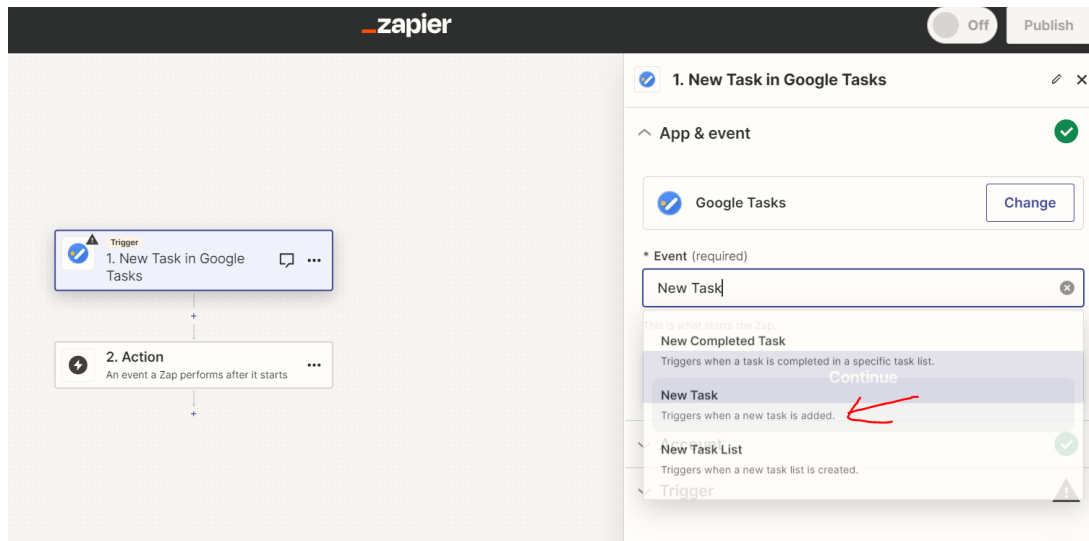

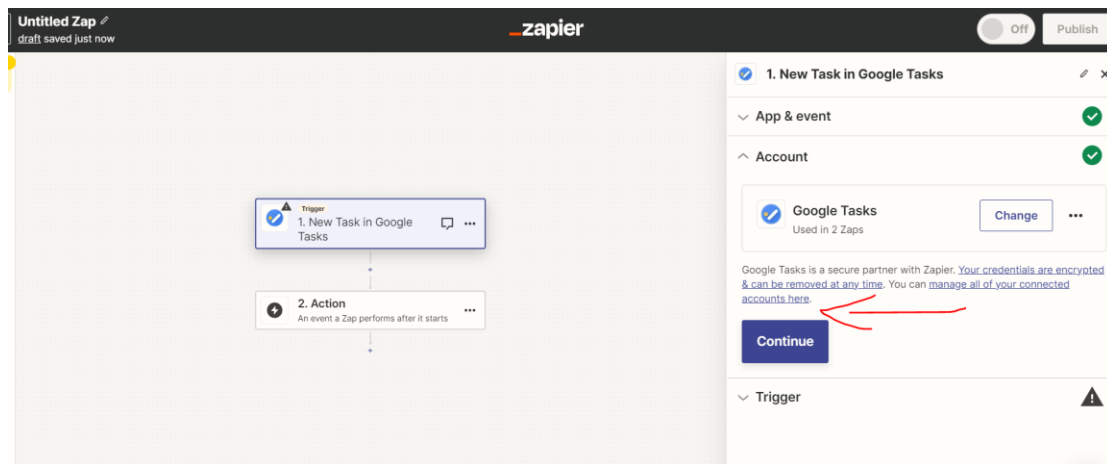4. Use Trigger and Action method, Click on the trigger to configure.

5. **Trigger:** search for google tasks and choose it.

6. Follow the figure to Configuring the trigger: Google tasks
7. APPS and Events: Select New Task

8. Accounts : Use your Google ID to proceed with.

9. Trigger: under the task list, select the task what you have created in your google tasks app.
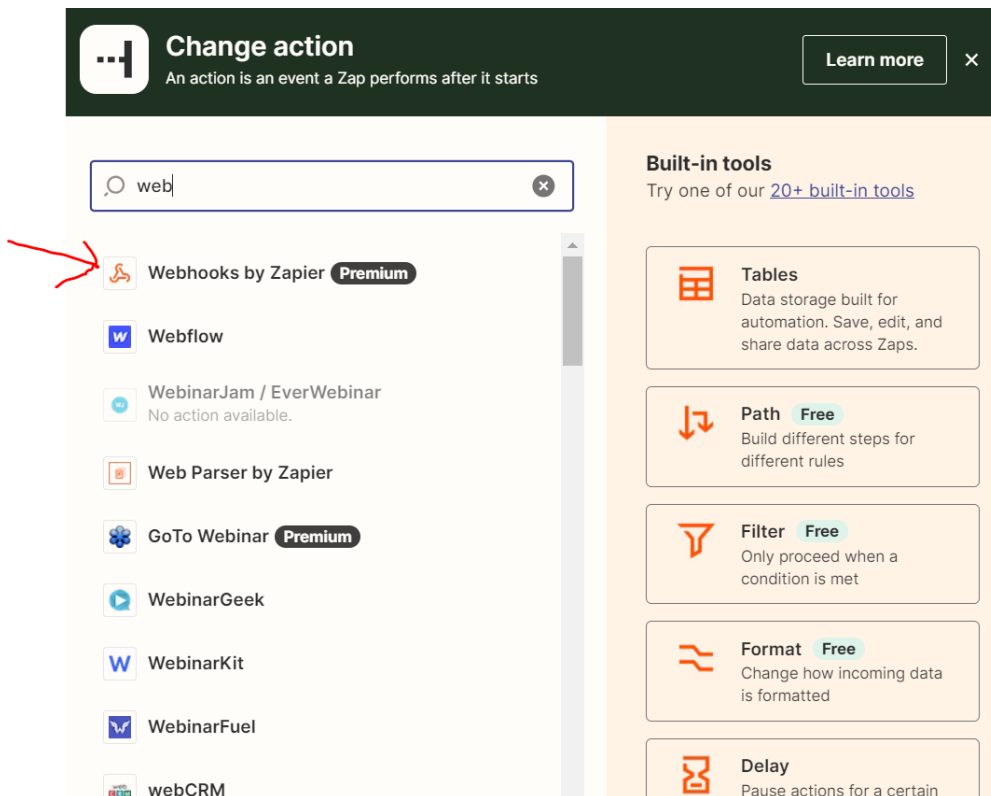
10. Test: test and click on continue with selected record

11. Action: Click on action to configure it.
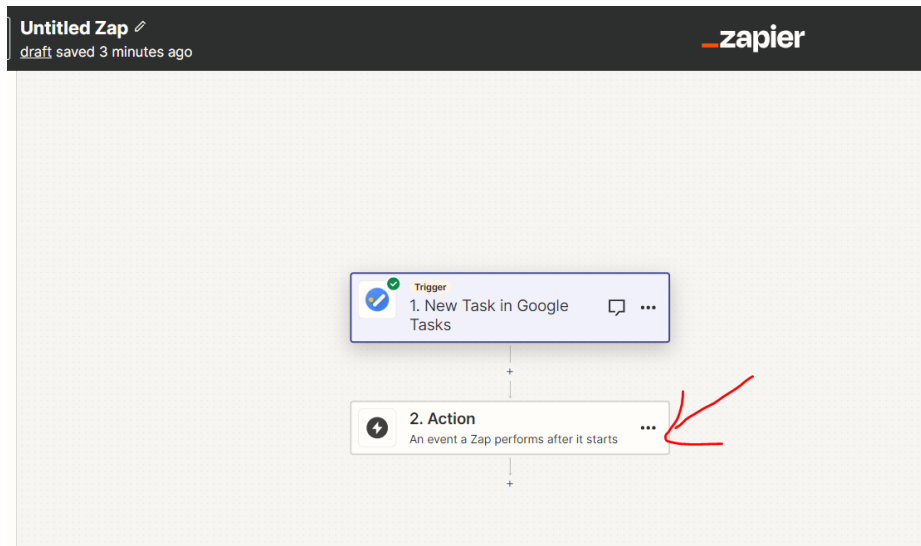
12. Search for webhooks by Zapier and choose it.

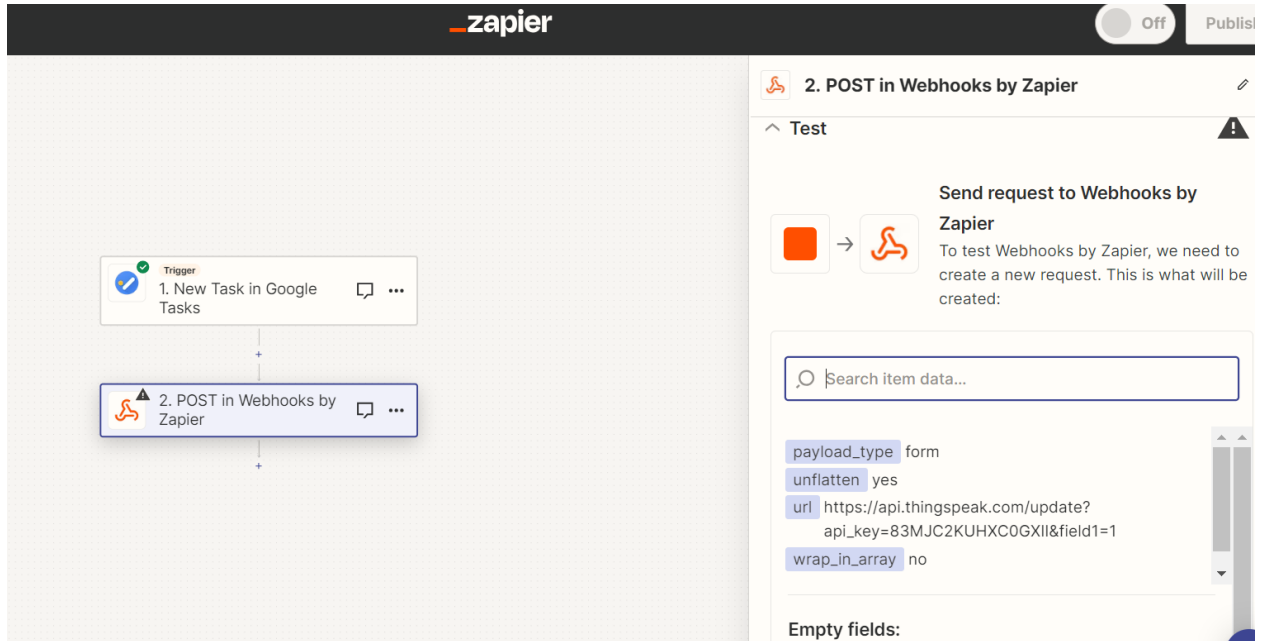13. Event: Under choose the event select POST and continue

14. Under Action: paste the ON API URL of the Thinspeak and click continue to proceed

ON: https://api.thingspeak.com/update?api_key=83MJC2KXXXX0GXII&field1=1

15. Test: Click on test step to configure action

16. Open the main dashboard in the zapier and turn ON the created ZAP
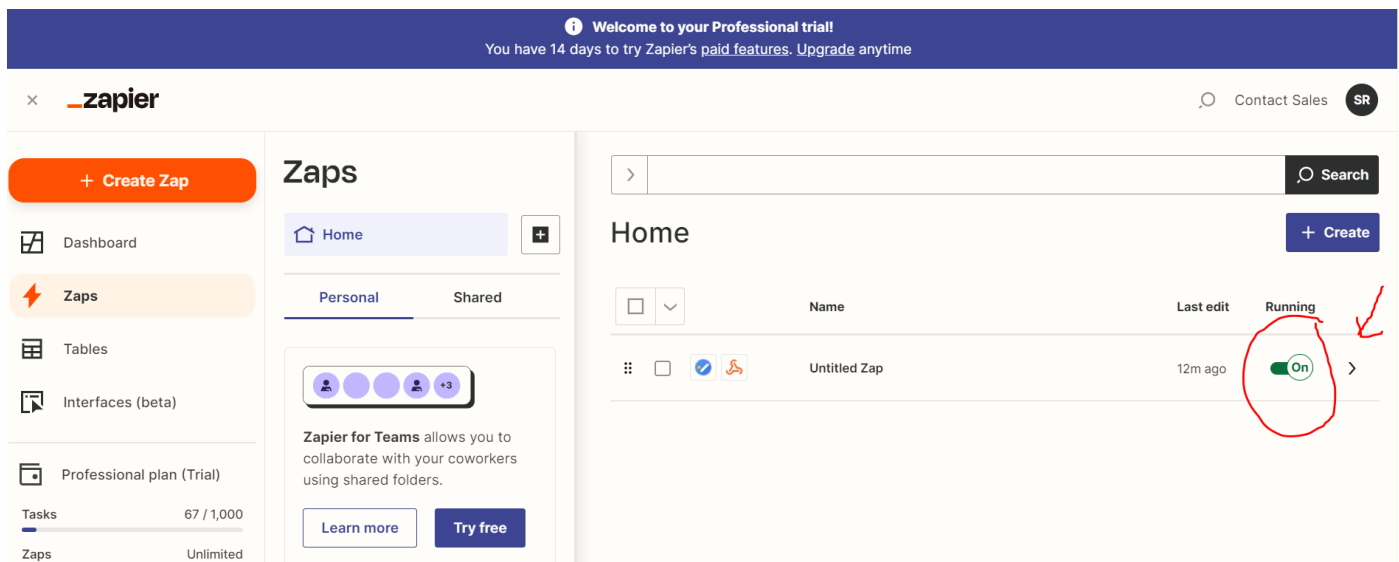
Step 4: Running the task

1. **Open google Tasks app in your mobile and under the created Tasks (Home) click on + sign to create new task.**

2. **When the new task is created the bulb glows in the Thinkspeak.**

OUTPUT:

Home Auto

Channel ID: **2032199**
Author: mwa0000024881606
Access: Private

Private View	Public View	Channel Settings	Sharing	API Keys	Data Import / Export

➕ Add Visualizations	➕ Add Widgets	↗ Export recent data

MATLAB Analysis **MATLAB Visualization**

Channel 1 of 3 ‹ ›

Channel Stats

Created: 23 days ago
Last entry: less than a minute ago
Entries: 3

Field 1 Chart

Home Auto

Bulb

a few seconds ago