

APSC 1001

Thunkable App Development Environment – (In)Activity Alert

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Photo: Kartik Bulusu

Build a (In)Activity Alert App - Motivation

Bill Hammack (i.e. The Engineer Guy): How a Smartphone Knows Up from Down (accelerometer)



Source:
<https://youtu.be/KZVgKu6v808>

How to stay active during the COVID-19 quarantine?

Take short active breaks during the day.

- Short bouts of physical activity add up to the weekly recommendations
- Dancing, playing with children, and performing domestic chores such as cleaning and gardening are other means to stay active at home.

Stand up.

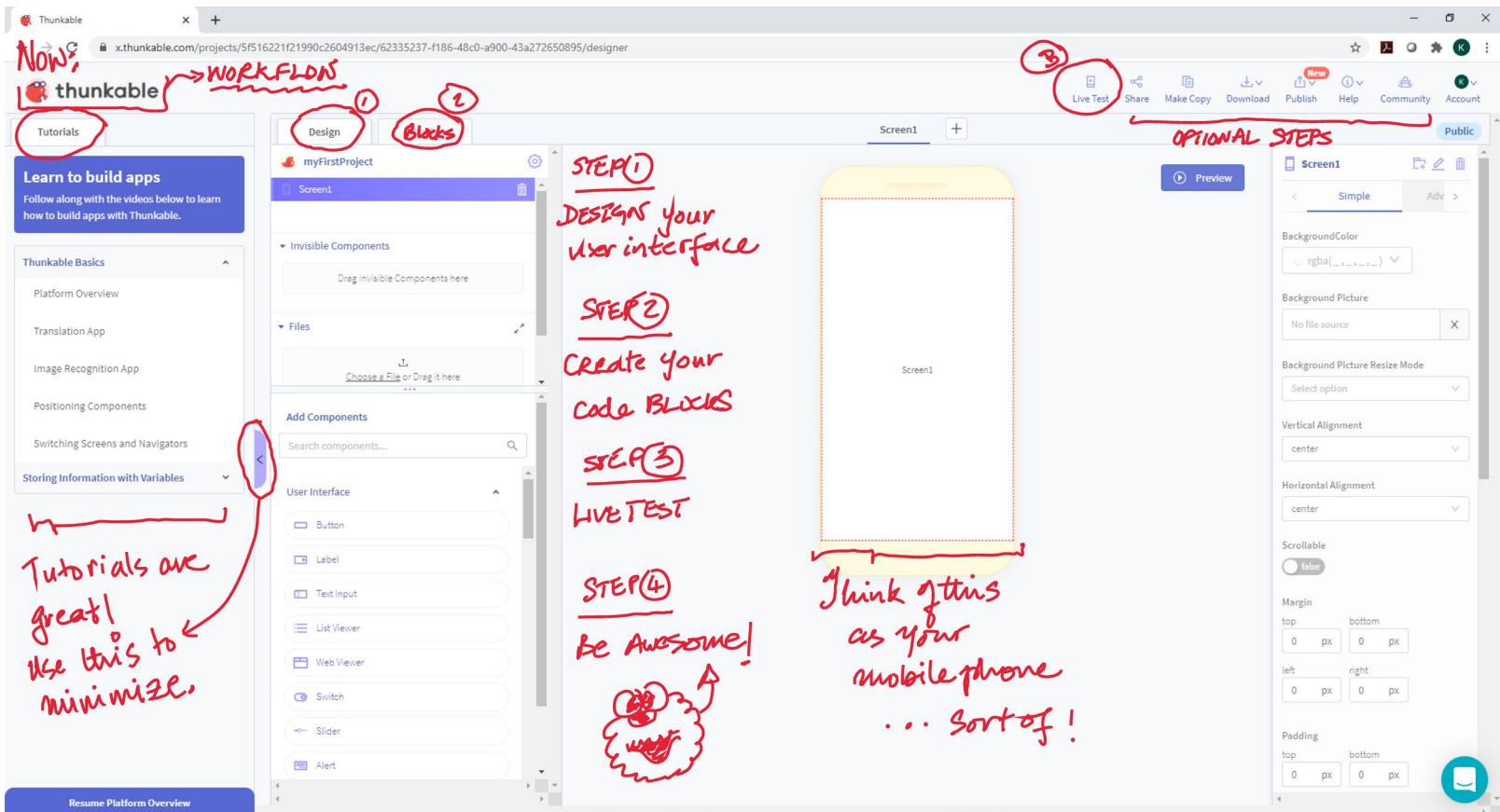
- Reduce your sedentary time by standing up whenever possible.
- Ideally, aim to interrupt sitting and reclining time every 30 minutes.

Walk.

- Even in small spaces, walking around or walking on the spot, can help you remain active.
- If you have a call, stand or walk around your home while you speak, instead of sitting down.
- If you decide to go outside to walk or exercise, be sure to maintain at least a 1-meter distance from other people.

Source:
<https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/publications-and-technical-guidance/noncommunicable-diseases/stay-physically-active-during-self-quarantine>

Build a (In)Activity Alert App - Goals



Goals:

1. Create a UI with
 - i. Timer
 - ii. Text_to_Speech
 - iii. Image
 - iv. Start Button
 - v. Stop Button
 - vi. Labels
2. Create CODE BLOCKS for
 - i. START Button
 - ii. Accelerometer
 - iii. Timer
 - iv. Stop Button
 - v. Label, Text and Speech

Step 1: Create the User Interface (UI)

The screenshot shows the Thunkable app interface. On the left, the 'Design' tab is selected, displaying a project structure for 'ActivityAlert' with 'Screen1'. The screen contains a title 'In)Activity Alert', two silhouettes of people at a desk, a 'START' button, a timer display 'Timer: 0 seconds', and a 'STOP' button. To the right of the screen is a preview window showing the same interface. Below the preview is a sidebar with various settings for 'Screen1', including 'BackgroundColor' set to `rgba(0, 64, 101, 1)`, 'Vertical Alignment' set to 'center', and 'Horizontal Alignment' set to 'center'. At the bottom of the sidebar, there are buttons for 'Timer1', 'Text_To_Speech1', and 'Accelerometer_Activity'. The top navigation bar includes options like 'Live Test', 'Share', 'Make Copy', 'Download', 'Publish', 'Help', 'Community', and 'Account'. A 'Public' button is also visible.

1. Create 4 Rows
2. Each row has an
 1. Image
 2. Button or
 3. Labels
3. All rows are made visible

GWU Buff Color:
R = 200
G = 177
B = 139
A = 100

GWU Blue Color:
R = 0
G = 64
B = 101, A = 100

Step 2: Create CODE BLOCKS



Design Blocks

Control
Logic
Math
Text
Lists
Color
Device
Objects
Variables
Functions

Timer1
Text_To_Speech1
Accelerometer_Activity
Label1
Image1
Row3
Button_START
Row2
Label5
Label4_TimerCount
Label3
Row5
Button_STOP
Row1
Screen1
Any Component

Start Button Code Blocks

```
when Screen1 Opens
do
  from Accelerometer_Activity set Enabled to true
  from Accelerometer_Activity set Sensitivity to high

when Button_START Click
do
  in Timer1 call Start
```

Timer Code Blocks

```
when Timer1 Fires
do
  from Timer1 set Enabled to true
  from Label4_TimerCount set Text to
    from Label4_TimerCount get Text + 1
  if from Label4_TimerCount get Text = 20
    do
      from Image1 set Picture to noun_stretching_29956.png
      from Label4_TimerCount set Text to 0
      from Timer1 set Enabled to false
      in Text_To_Speech1 call Speak
        text "Take a break and stretch for about 5 minutes."
      wait 5 seconds
      in Text_To_Speech1 call Speak
        text "Inactive cycle ended. Resume your work."
      from Image1 set Picture to noun_Meeting_83144.png
      from Timer1 set Enabled to true
```

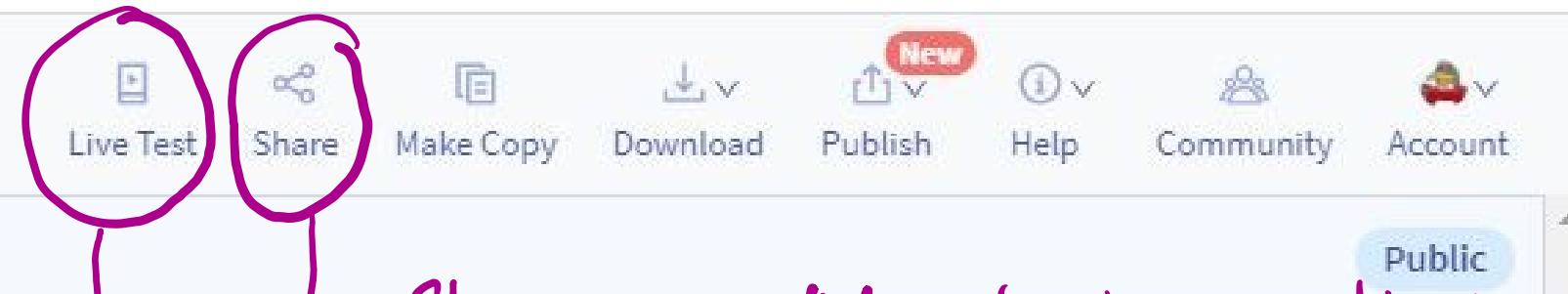
Accelerometer Code Blocks

```
when Accelerometer_Activity Shaking
do
  from Image1 set Picture to noun_stretching_29956.png
  from Label4_TimerCount set Text to 0
  from Timer1 set Enabled to false
  in Text_To_Speech1 call Speak
    text "Good job breaking the inactive cycle. Resume you..."
  from Image1 set Picture to noun_Meeting_83144.png
  wait 5 seconds
```

Stop Button Code Blocks

```
when Button_STOP Click
do
  from Image1 set Picture to noun_Meeting_83144.png
  from Timer1 set Enabled to false
  in Text_To_Speech1 call Speak
    text "Click START to reset cycle"
  from Label4_TimerCount set Text to 0
  from Accelerometer_Activity set Enabled to false
```

Step 3: Live Test



Share: 1. Will help in creating a shareable weblink
that you can use to submit your assignment
2 And share it with anyone who is awesome.

Live Test:

1. Will give you a clear and clean
working version of your APP and

2. Will test the same version
on Thunkable Live installed
on your mobile phone.