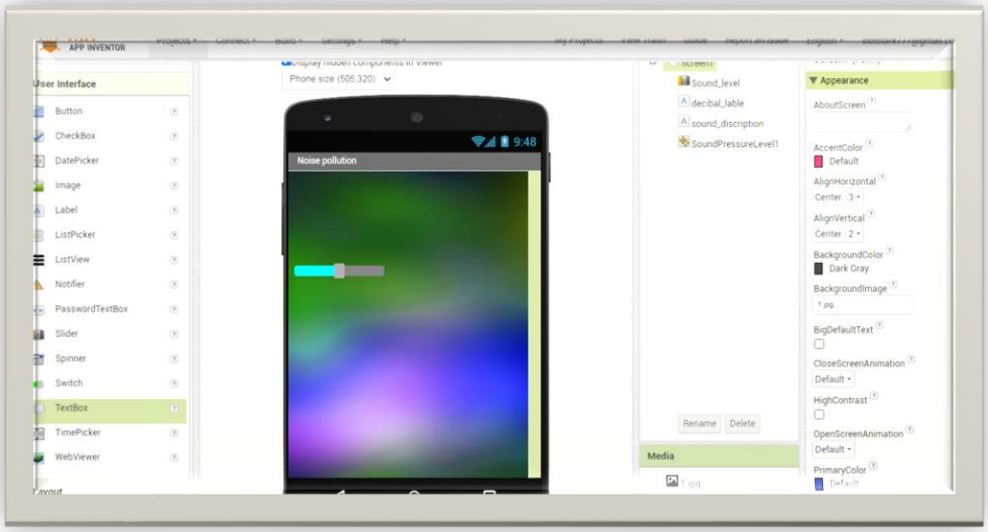
Noise Pollution Monitoring System

Development Part – 2

An application developed for noise pollution monitoring system using MIT App inventor.

Application UI Design:

- The application UI consists of a text box and a slider which shows the dB (decibels) of the noise produced by the source.
- The slider shows the noise rate with reference to the color indicator, where the slider will be green when low the low dB is recognized and turns out to be red when it goes higher.
- The UI can also have a dB meter through which we can maintain the limit of the noise produced by the source.



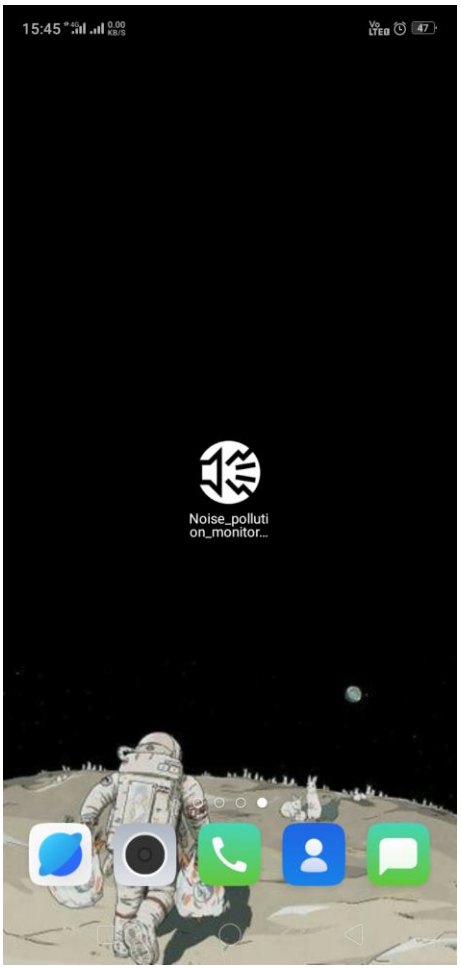
Application Backend Codes:

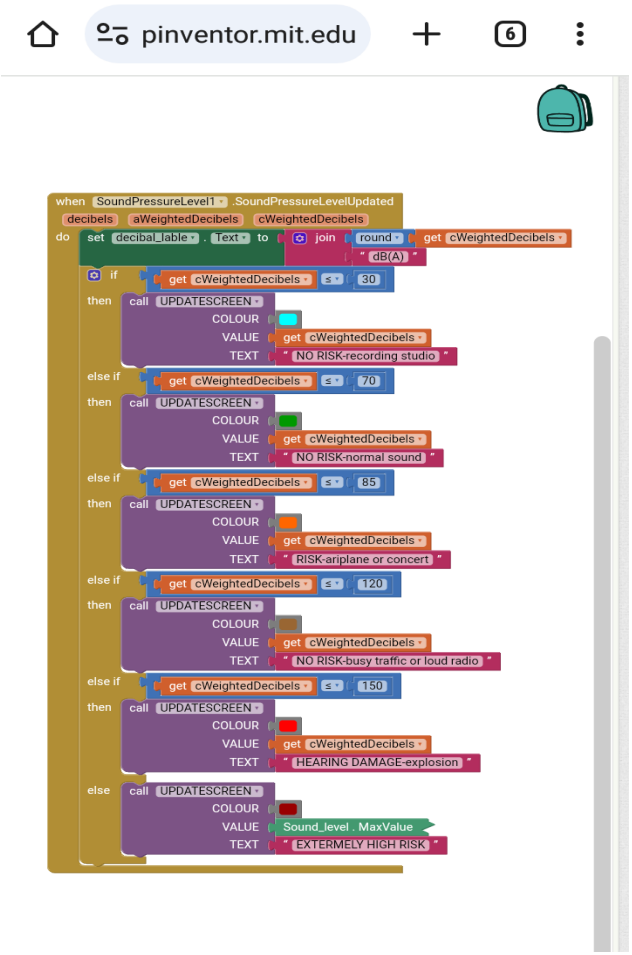
The code consists of a screen with a sound pressure sensor which shows the noise levels from the source.

The codes are given below:

Working of Application:

When the device senses the noise, it records the dB and sends the measure to the application, and it shows the noise levels through the slider in the application.


15:45
Noise_polluti
on_monitor...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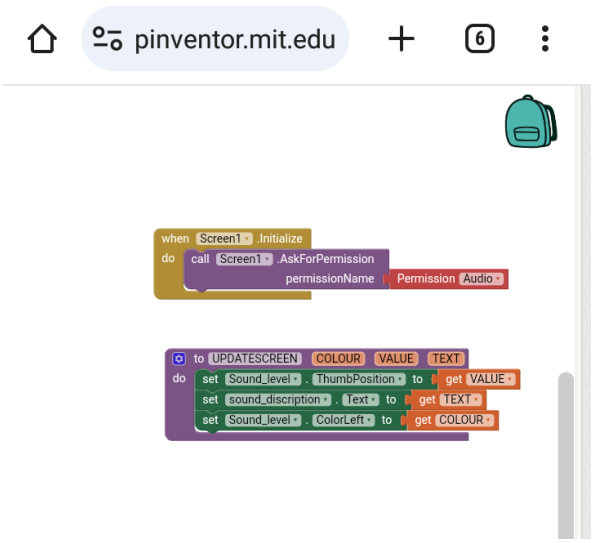
when SoundPressureLevel1 .SoundPressureLevelUpdated
decibels aWeightedDecibels cWeightedDecibels
do set decibal_lable . Text to join round get cWeightedDecibels
" dB(A) "
if get cWeightedDecibels ≤ 30
then call UPDATESCREEN
COLOUR
VALUE get cWeightedDecibels
TEXT " NO RISK-recording studio "
else if get cWeightedDecibels ≤ 70
then call UPDATESCREEN
COLOUR
VALUE get cWeightedDecibels
TEXT " NO RISK-normal sound "
else if get cWeightedDecibels ≤ 85
then call UPDATESCREEN
COLOUR
VALUE get cWeightedDecibels
TEXT " RISK-ariplane or concert "
else if get cWeightedDecibels ≤ 120
then call UPDATESCREEN
COLOUR
VALUE get cWeightedDecibels
TEXT " NO RISK-busy traffic or loud radio "
else if get cWeightedDecibels ≤ 150
then call UPDATESCREEN
COLOUR
VALUE get cWeightedDecibels
TEXT " HEARING DAMAGE-explosion "
else call UPDATESCREEN
COLOUR
VALUE Sound_level . MaxValue
TEXT " EXTERMELY HIGH RISK "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when Screen1 .Initialize
do call Screen1 .AskForPermission
permissionName Permission Audio
to UPDATESCREEN COLOUR VALUE TEXT
do set Sound_level . ThumbPosition to get VALUE
set sound_discription . Text to get TEXT
set Sound_level . ColorLeft to get COLOUR