

# Summer Project - Electronic Piano

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## 1 Task 1- Finding the Analog Values that differentiate the buttons of the melody part of iPiano

Since the Arduino UNO Board contains only 12 available digital IO pins, we quickly run out of available pins on larger projects or projects requiring a number of buttons or a keypad. So, we're going to be looking at how we can set up a large number of buttons to run on a single Arduino analog input, using resistors to differentiate between buttons.

Go through the link attached:

<https://www.the-diy-life.com/multiple-push-buttons-on-one-arduino-input/>

We are going to use the second method mentioned in the above link in our project, where we are going to connect the resistors in a voltage divider fashion.

Assuming you have already gone through the link and pictured a circuit diagram for each of the model, the first task of this project is that you have to replicate the below given circuit diagram in your Arduino board and find the Analog Value that the Analog Pin reads upon pressing a particular push button. Write suitable code to find the Analog value by printing it on the Serial monitor using the Serial Monitor function.

Do remember that Analog values range from 0 to 1023 only.

