**Algorithm**:

1. Get the required input to be translated.
2. Split the words in each sentence and store them in a list.
3. For each word,
   1. The word is parsed and if there exists a **capital letter** then it is represented as ‘@’ to map it with the corresponding braille font in the hasp map.
   2. If any **number** exists, precede it with an ‘#’ and return it. Else return the original string.
   3. The words are trimmed and the **punctuations** are extracted. Translate the punctuations and the remaining word separately.
   4. For each substring in the text
      1. Check whether the entire string is present in the dictionary.
      2. If present, replace it with the equivalent braille code and return.
      3. Else, for each substring, check if the substring is present in the dictionary.
      4. If the substring is present, check the position code associated with it i.e., (1,2,3,4)
      5. If the position code matches, replace it with the equivalent braille code and return.
4. Return the resultant braille code as a string

What is the name of our project

**Instructions for creation of execution environment and to run the solution:**

1.) The python program can be documented in any text editor preferably a notepad editor.

2.) The python code saved in .py extension can be run as such in any computing device.

3.) Connect the arduino to COM3 port to which the python code communicates. The port name or number can be altered depending on the device and port used.

4.) A webcam or any other digital camera is to be connected to capture the handwritten text.