

ALGORITHM ESP32

Step 1: open "Arduino IDE"

Step 2: Plug the piece into the port via a USB cord >> Tools >> port >> Make sure that the port specified in the "Arduino IDE" is the same as the one in which the device is connected to the laptop or your PC

Step 4: File >> preferences >> Additional boards manager URLs: "
https://dl.espressos.com/dl/package_esp32_index.json"

Step 5: Tools >> Board >> Board manager >> ESP 32 >> install

Step 6: Tools >> Board >> ESP32 Arduino >> WEMOS D1 MINI ESP32

Step 3: file >> examples >> Basics >> blink, This step works to ensure the correct operation of the piece by programming the existing LED in the piece with changing the time in "delay" to ensure that it works

Blink code:

```
// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
  delay(2000);                     // wait for a second
  digitalWrite(LED_BUILTIN, LOW);  // turn the LED off by making the voltage LOW
  delay(1000);                     // wait for a second
}
```

MAKING A CONVERTER FROM VOICE TO TEXT IN THE ARABIC LANGUAGE, SUCH AS:

<https://s-m.com.sa/r2/test/>

1: I used codepen to write the code in JavaScript

https://codepen.io/yara_ghazi/pen/bGvgvbE?editors=0010

2: code of html

```
HTML
1 <html lang="ar-AE">
2 <head>
3 <meta charset="utf-8">
4 <meta name="viewport" content="initial-scale=1.0, maximum-scale=1.0, user-
  scalable=1">
5 <title>convertor Home</title>
6 <link rel="stylesheet" type="text/css" href="css/style.css">
7 </head>
8 <body>
9 <div class="voice_to_text"> <h1>محول من صوت الى نص يدعم اللغة العربية</h1>
10 <div class="text"><h2>هذا الموقع هو مطلوب من مهام مسار انترنت الاشياء و علم
  البيانات فالتدريب الخاص بشركة الاساليب الذكية لعام 2022 .. يارا غازي
  الهيميلي</h2>
11 <textarea id="convert_text"></textarea> <button id="click_to_convert">صوت الى
  نص</button>
12 </div>
13 <script type="text/javascript" src="js/script.js"></script>
14 </body>
```

3: Run html

محول من صوت الى نص يدعم اللغة العربية

هذا الموقع هو مطلوب من مهام مسار انترنت الاشياء و علم البيانات فالتدريب الخاص بشركة الاساليب الذكية لعام 2022 .. يارا غازي الهيميلي

4:code of CSS

```
* CSS
1 * ,*::after,*::before{
2     -webkit-box-sizing: border-box;
3     -moz-box-sizing: border-box;
4     -ms-box-sizing: border-box;
5     box-sizing: border-box;
6 }
7 body{
8     font-family: arial;
9     font-size: 16px;
10    margin: 0;
11    background:linear-gradient(to right bottom, #a48274 ,#f4e5df);
12    display: flex;
13    align-content: center;
14    min-height: 100vh;
15    color: #000;
16 }
17 .voice_to_text{
18     width: 600px;
19     text-align: center;
20 }
21 #convert_text{
22     width: 100%;
23     height: 200px;
24     border-radius: 10px;
25     resize: none;
26     padding: 10px;
27     font-size: 20px;
28     margin-bottom: 10px;
29 }
30 h1{
31     font-size: 50px;
32     color:#000;
33 }
34 h2{
35     font-size: 15px;
36     color:#000;
37 }
38 button{
39     padding: 12px 20px;
40     background: #433f3d;
41     border: 0;
42     border-radius: 5px;
43     cursor: pointer;
44     color: #f4e5df;
45 }
```

5:Run of CSS



6:code of js , the results in vin

```
JS
1 click_to_convert.addEventListener('click',function(){
2   var speech = true;
3   window.SpeechRecognition = window.webkitSpeechRecognition;
4   const recognition = new SpeechRecognition();
5   recognition.interimResults = true;
6   recognition.lang = 'ar';
7   recognition.addEventListener('result', e=>{
8     const transcript = Array.from(e.results)
9       .map(result =>result[0])
10      .map(result => result.transcript)
11      convert_text.innerHTML=transcript;
12   })
13   if(speech == true){
14     recognition.start();
15   }
16 })
```