

Raspberry Pi & Buzzer

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01

Compromisos

Mayo

Junio

Semana 4

Semana 1

Semana 2

Semana 3

Semana 4

Semana 1

Presentar avances del
proyecto

Integrar módulo Buzzer

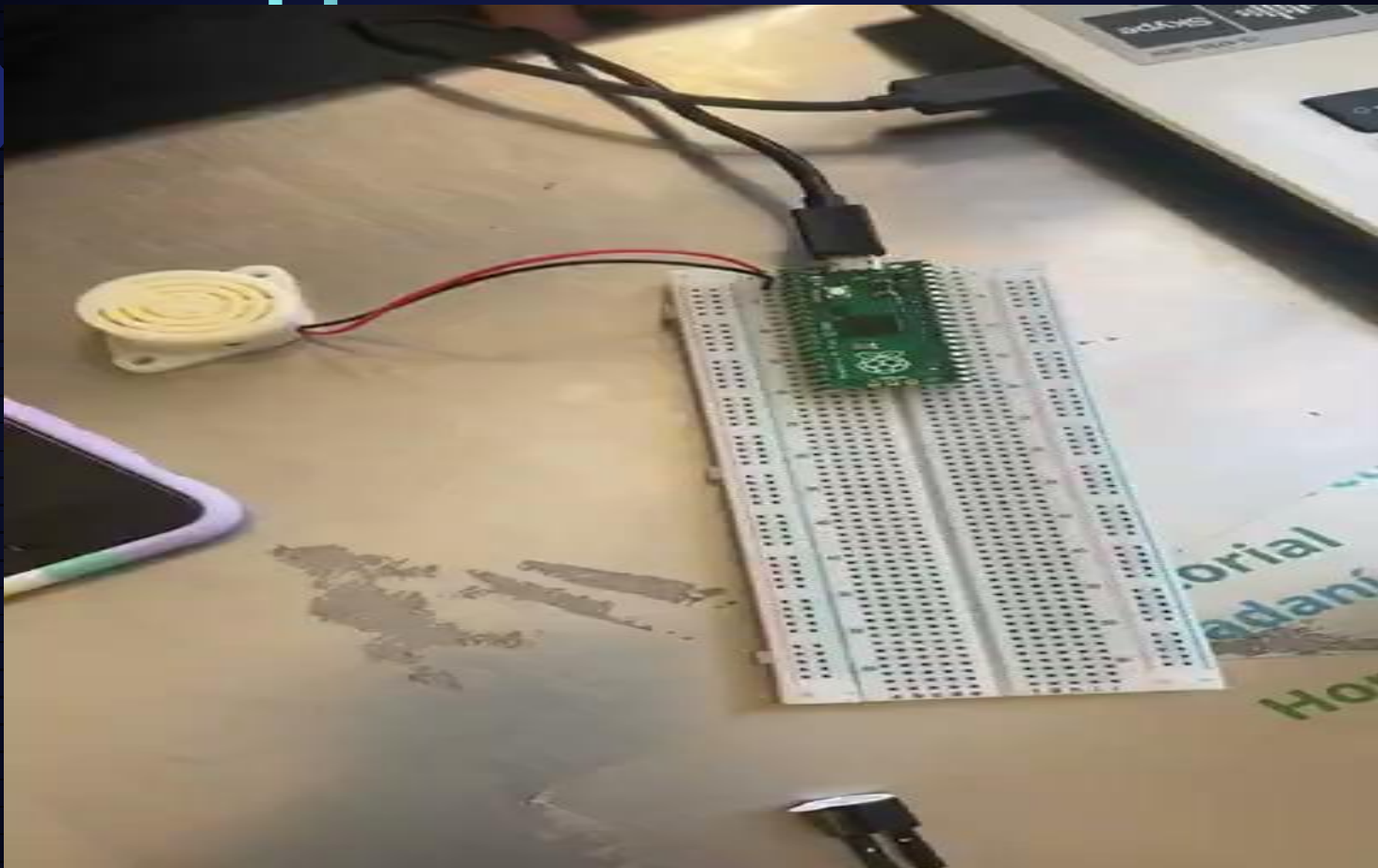
Desarrollar lógica del
controlador

Ejecutar pruebas de
funcionalidad

Documentación

Presentar proyecto final

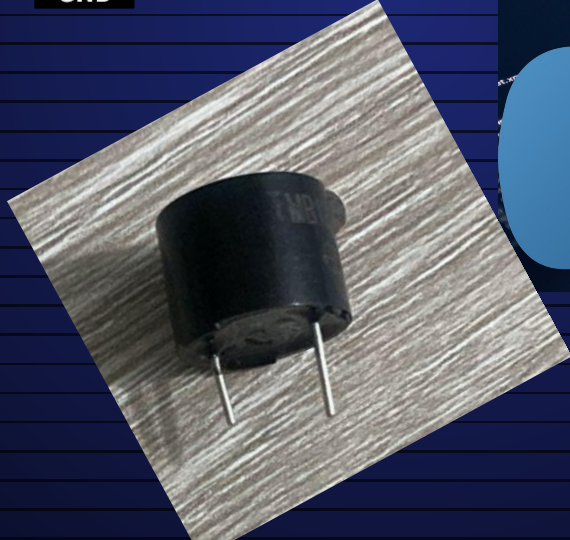




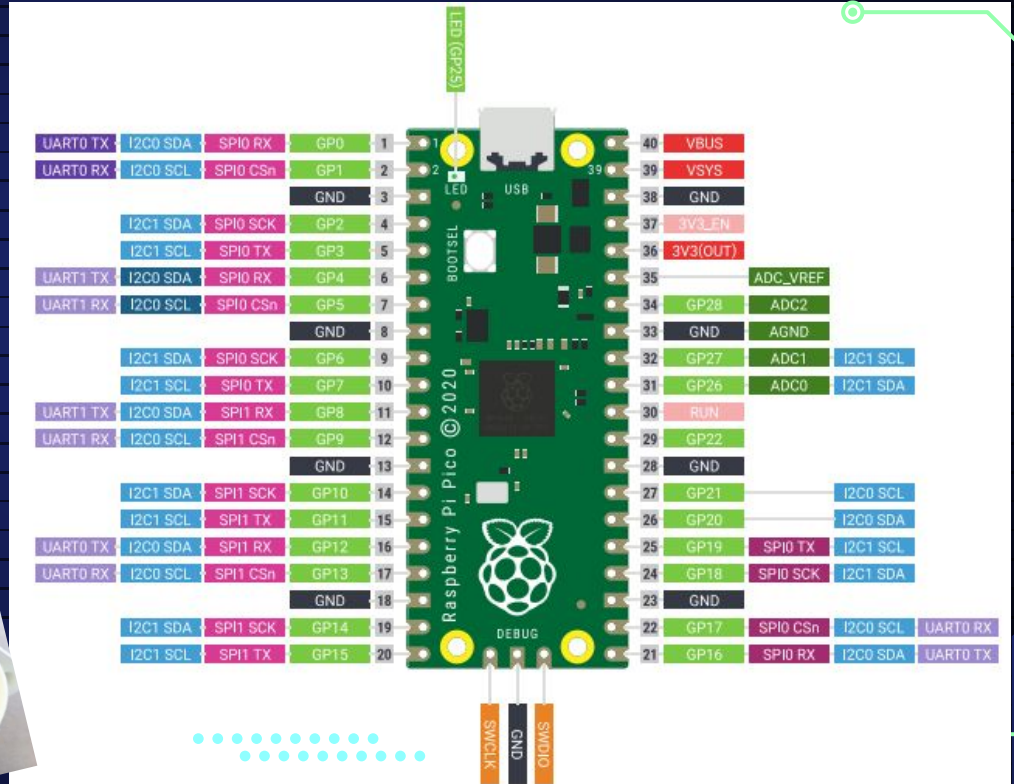
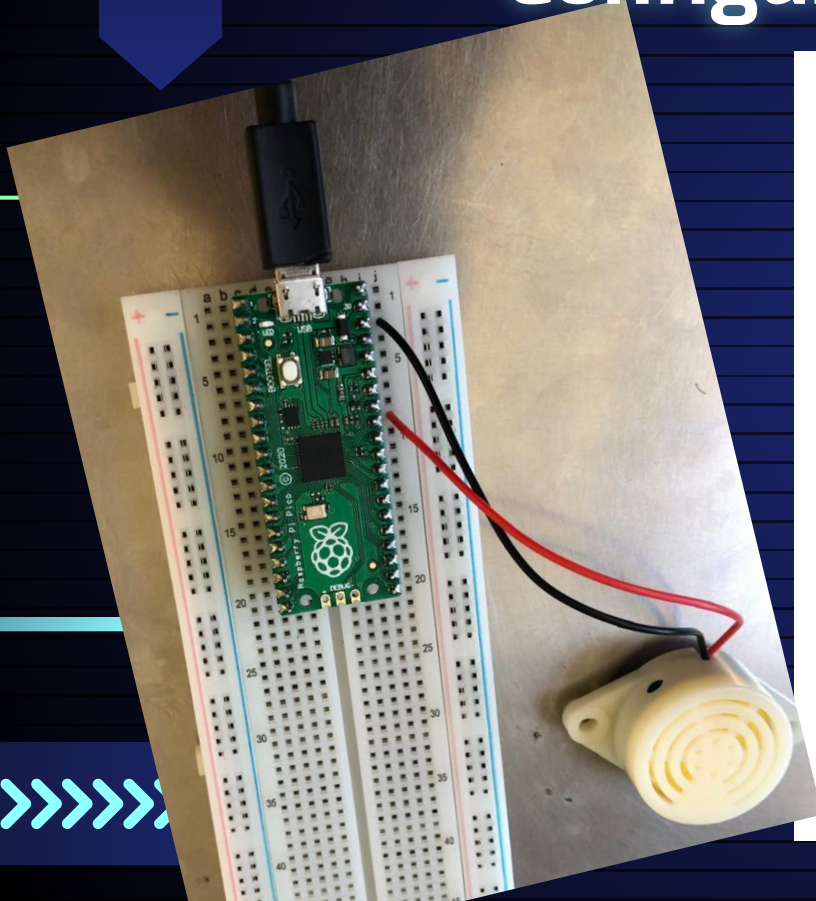


02

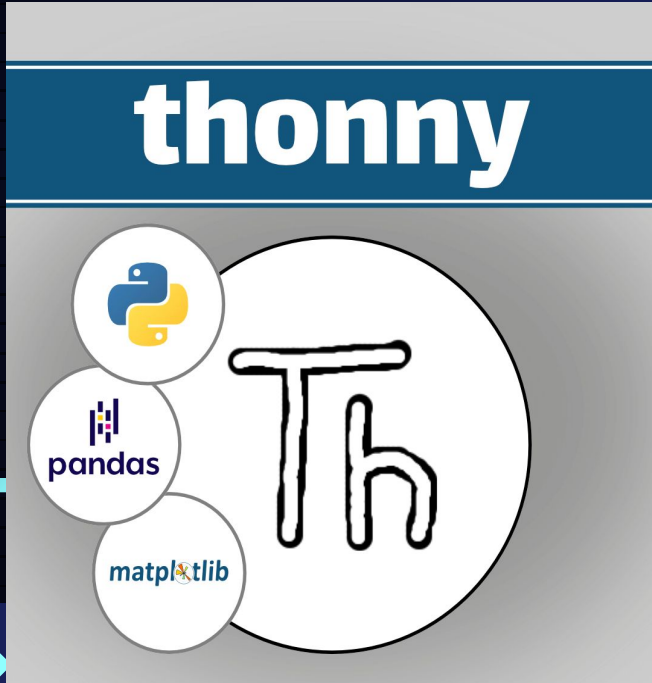
Implementación



Configuración Hardware



Configuración Software



The same interpreter which runs Thonny (default)
Alternative Python 3 interpreter or virtual environment ▶

MicroPython (Raspberry Pi Pico)

MicroPython (ESP32)

MicroPython (ESP8266)

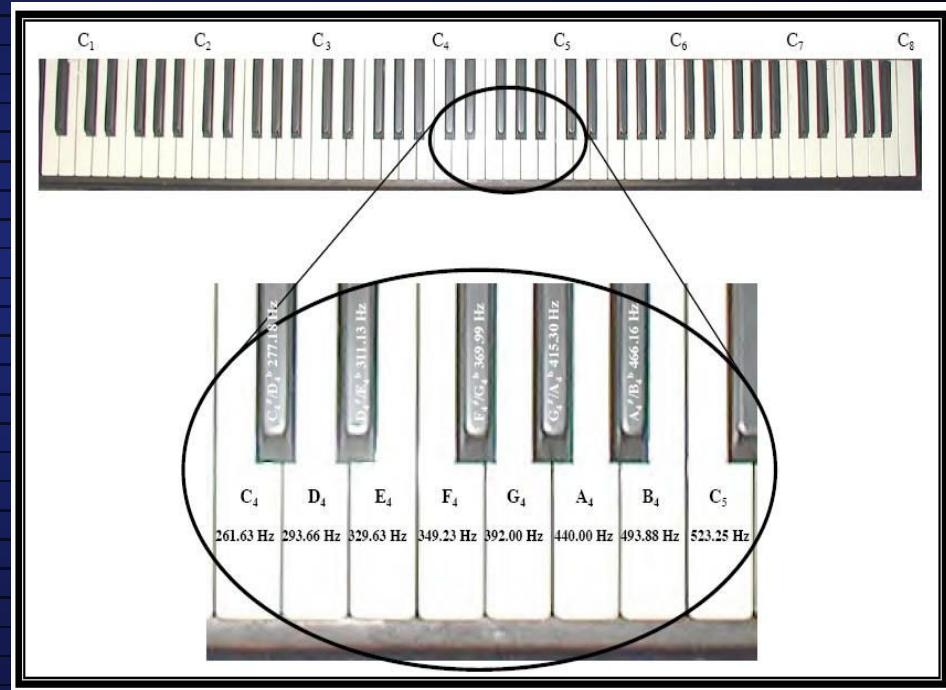
Configure interpreter...

Configuración Musical

Do Re Mi Fa Sol La Si Do
C D E F G A B C



Online Sequencer
Make music online



FRECUENCIA DE LAS NOTAS MUSICALES EN HERCIOS (Hz)

	OCTAVA 0	OCTAVA 1	OCTAVA 2	OCTAVA 3	OCTAVA 4	OCTAVA 5	OCTAVA 6	OCTAVA 7	OCTAVA 8
Do	16,3516	32,7032	65,4064	130,813	261,626	523,251	1046,50	2093,00	4186,01
Do# / Reb	17,3239	34,6479	69,2957	138,591	277,183	554,365	1108,73	2217,46	4434,92
Re	18,3540	36,7081	73,4162	146,832	293,665	587,330	1174,66	2349,32	4698,64
Re# / Mib	19,4454	38,8909	77,7817	155,563	311,127	622,254	1244,51	2489,02	4978,04
Mi	20,6017	41,2035	82,4069	164,814	329,628	659,255	1318,51	2637,02	5274,04
Fa	21,8268	43,6536	87,3071	174,614	349,228	698,456	1396,91	2793,83	5587,66
Fa# / Solb	23,1246	46,2493	92,4986	184,997	369,994	739,989	1479,98	2959,96	5919,92
Sol	24,4997	48,9995	97,9989	195,998	391,995	783,991	1567,98	3135,96	6271,92
Sol# / Lab	25,9565	51,9130	103,826	207,652	415,305	830,609	1661,22	3322,44	6644,88
La	27,5000	55,0000	110,000	220,000	440,000	880,000	1760,00	3520,00	7040,00
La# / Sib	29,1353	58,2705	116,541	233,082	466,164	932,328	1864,66	3729,31	7458,62
Si	30,8677	61,7354	123,471	246,942	493,883	987,767	1975,53	3951,07	7902,14



OCTAVA 1

OCTAVA 2

OCTAVA 3

OCTAVA 4

OCTAVA 5

OCTAVA 6

OCTAVA 7

Formato de Componentes

2

Tiempo

D4

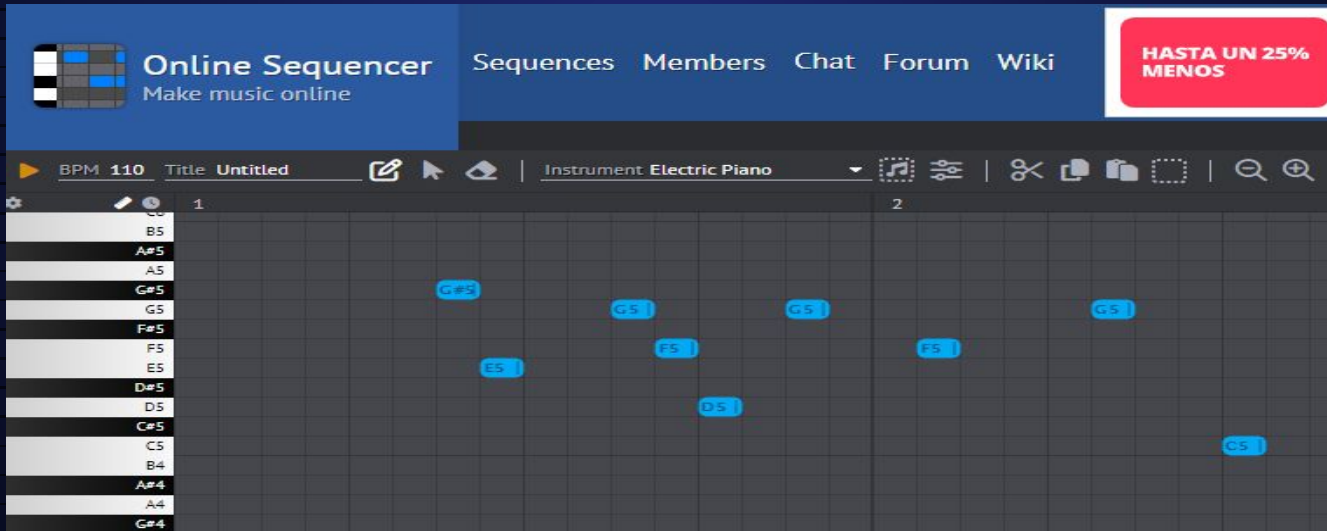
Nota

8

Duración

0

Instrumento

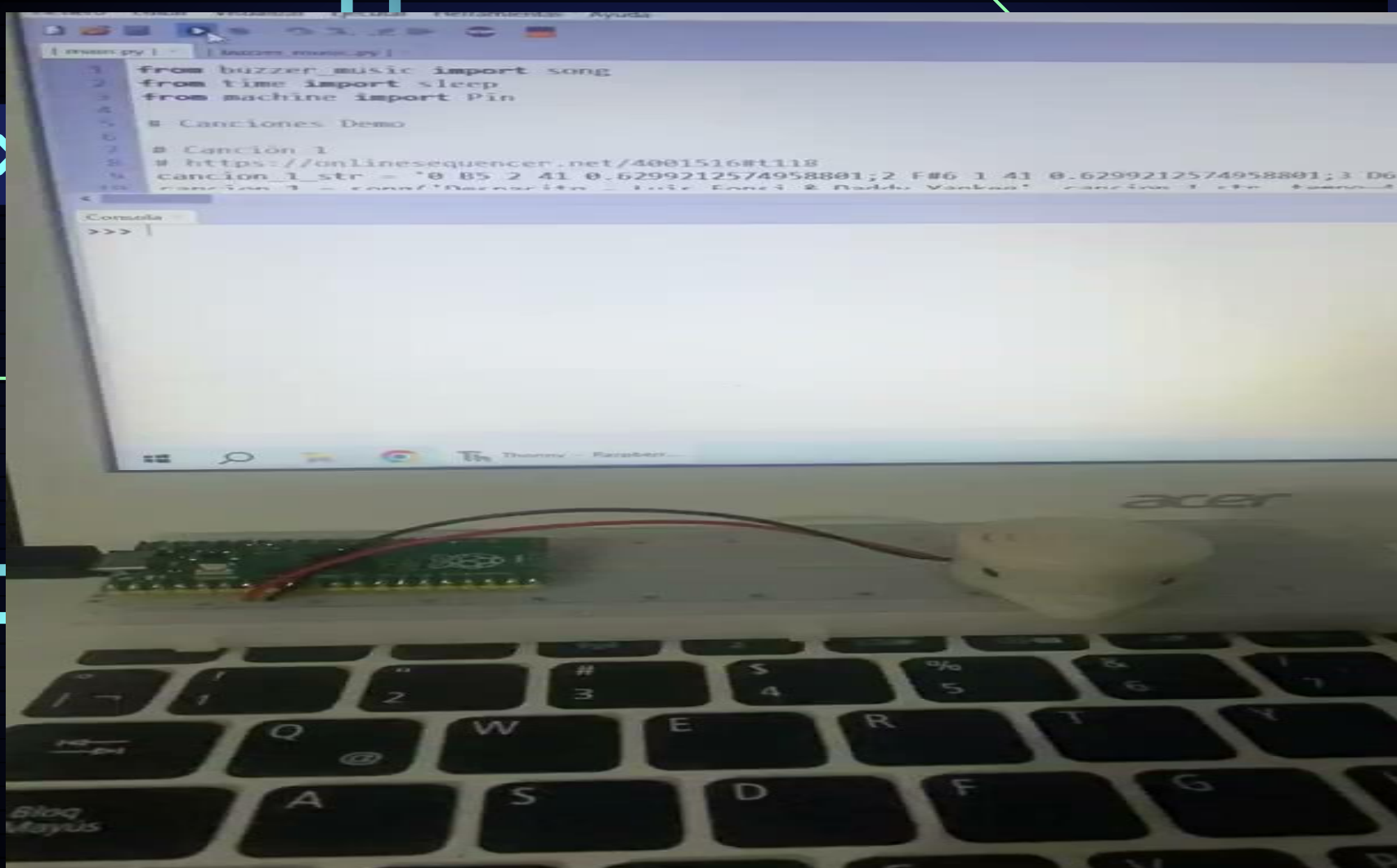


The screenshot displays the 'Online Sequencer' web application. The top navigation bar includes links for 'Sequences', 'Members', 'Chat', 'Forum', and 'Wiki'. A red promotional banner on the right states 'HASTA UN 25% MENOS'. The main interface shows a piano roll for an 'Electric Piano' instrument. The left sidebar lists piano keys from C8 down to C#4. The piano roll grid has two lanes, labeled '1' and '2'. Lane 1 contains several blue note markers with labels: G#5, G5, F#5, F5, E5, D#5, D5, C#5, C5, B4, A#4, A4, and C#4. Lane 2 contains blue note markers with labels: G#5, G5, F#5, F5, D#5, and C5. The interface also shows a BPM of 110 and a title of 'Untitled'.



03

Resultado





04


Conclusiones



Logros del Proyecto:


El proyecto logró desarrollar un controlador funcional para un módulo Buzzer en una Raspberry Pi Pico, permitiendo la reproducción programática de melodías.

Relevancia y Contribuciones al Campo:



El trabajo realizado es significativo por su potencial para ampliar las capacidades de la Raspberry Pi Pico, facilitando su uso en proyectos de IoT, educación y entretenimiento.

Recomendaciones para Trabajos Futuros:



Se sugieren futuras investigaciones para mejorar la calidad del sonido y optimizar el rendimiento del sistema.



The background is a dark blue gradient with various abstract geometric elements. In the top left, there are two vertical light blue lines. In the top right, a green line with a small circle at its end extends from the edge. On the left side, two horizontal green lines with small circles at their ends are visible. At the bottom left, there is a dark blue arrow pointing to the right. At the bottom right, there are two horizontal light blue lines. A horizontal green line with a small circle at its end is also visible near the bottom center.

Gracias!