

Laboratorio → Procesamiento Digital de Señales

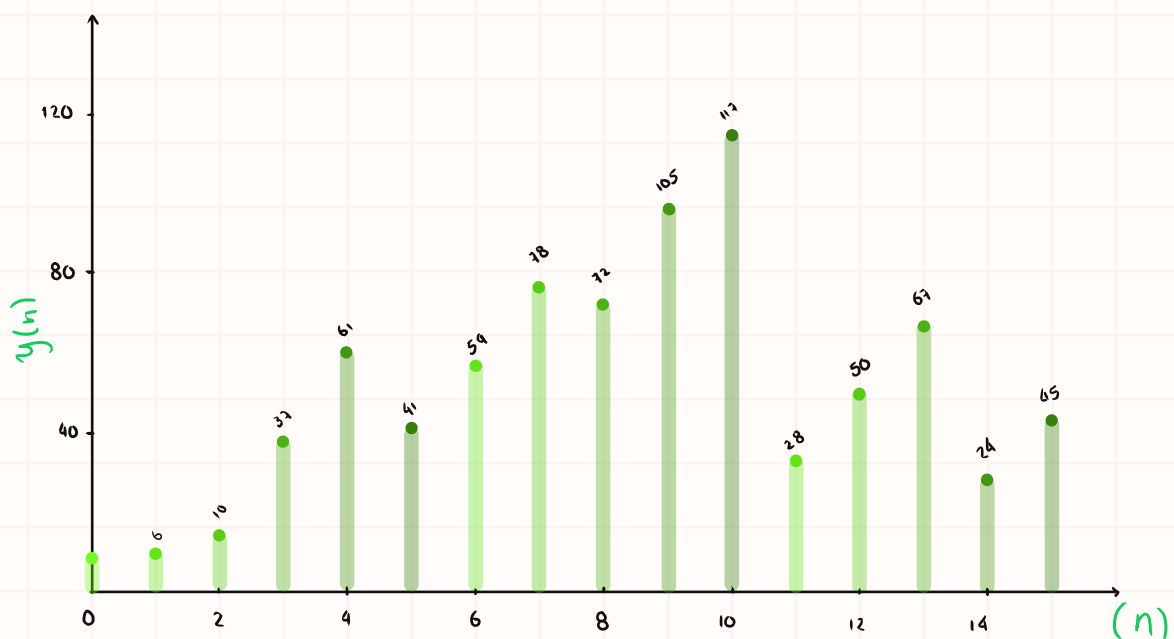
Convolución, Correlación y Transformación

Integrantes: Esteban Rey, Lizeth Garzon, Valentina Vargas.

→ Señal resultante de las convoluciones: $h[n] * x[n]$

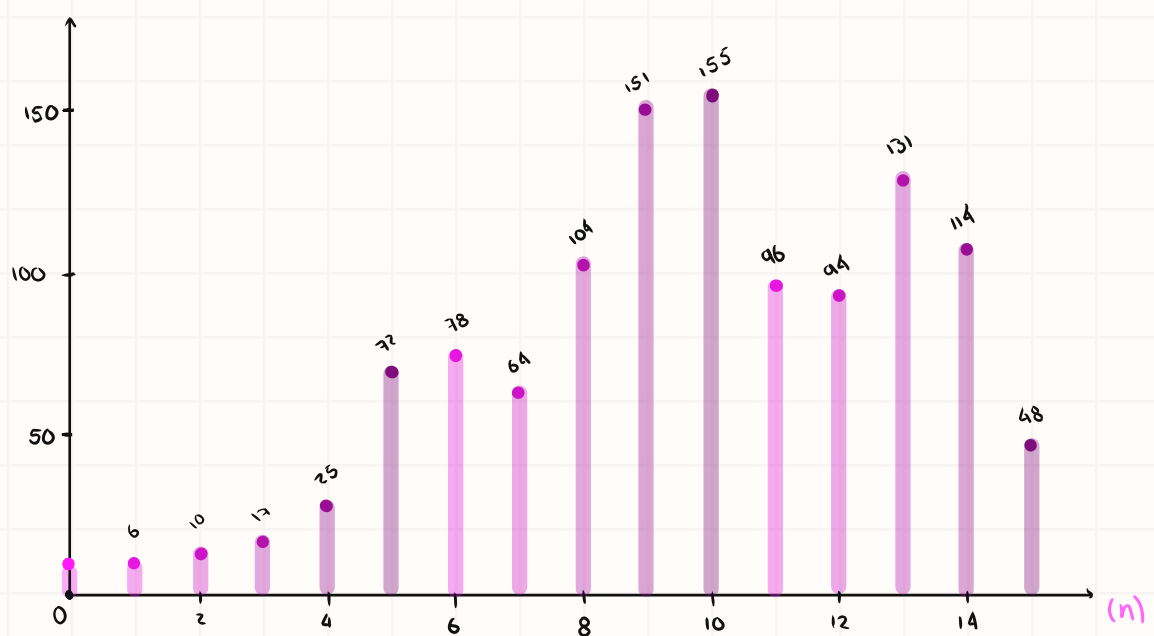
Esteban Rey: $\left\{ \begin{array}{l} \text{Cedula: } 1025526239 \\ \text{Codigo: } 5600615 \end{array} \right\} \rightarrow y(n) = \{ 5, 6, 10, 37, 61, 41, 59, 78, 72, 105, 117, 28, 50, 67, 24, 45 \}$

	1	0	2	5	5	2	6	2	3	9
5	5	0	10	25	25	10	30	10	15	45
6	6	0	12	30	30	12	36	12	18	54
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
6	6	0	12	30	30	12	36	12	18	54
1	1	0	2	5	5	2	6	2	3	9
5	5	0	10	25	25	10	30	10	15	45



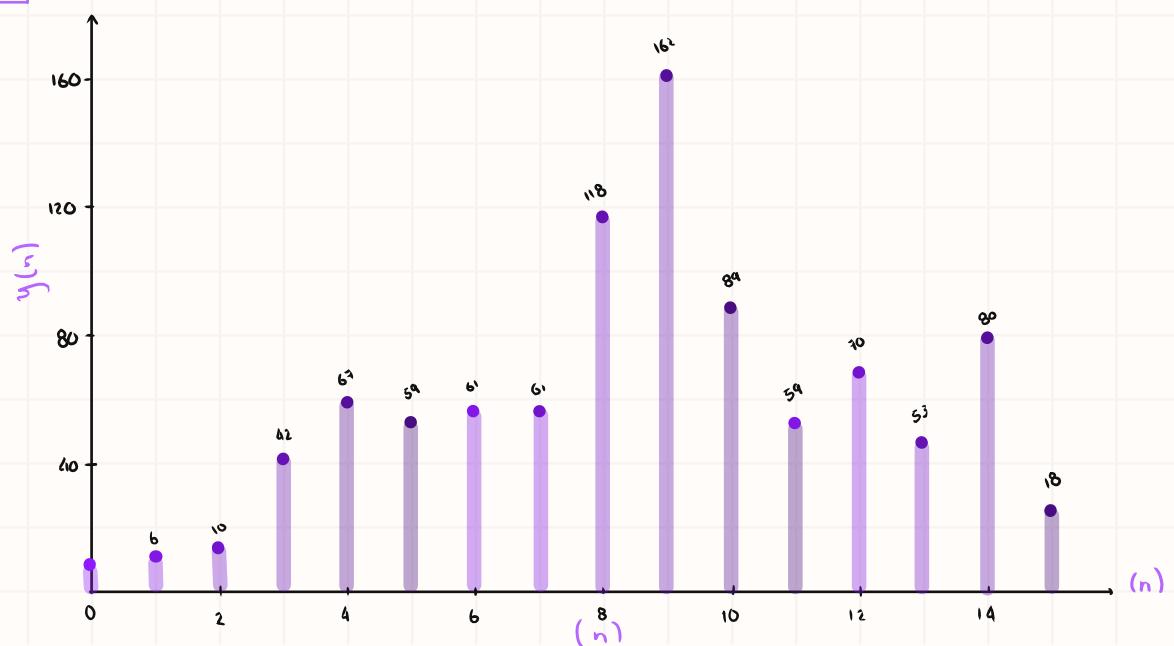
Lizeth Garzon: $\left\{ \begin{array}{l} \text{Cedula: } 1021392678 \\ \text{Codigo: } 5600496 \end{array} \right\} \rightarrow y(n) = \{ 5, 6, 10, 17, 25, 72, 78, 64, 104, 151, 155, 96, 94, 131, 114, 48 \}$

	1	0	2	1	3	9	2	6	7	8
5	5	0	10	5	15	45	10	30	35	40
6	6	0	12	6	18	54	12	36	42	48
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
4	4	0	8	4	12	36	8	24	28	32
9	9	0	18	9	27	81	18	54	63	72
6	6	0	12	6	18	54	12	36	42	48



Valentina Vargas: $\left\{ \begin{array}{l} \text{Cedula: } 1026552182 \\ \text{Codigo: } 5600649 \end{array} \right\} \rightarrow y(n) = \{ 5, 6, 10, 42, 67, 59, 61, 61, 118, 162, 89, 59, 70, 53, 80, 18 \}$

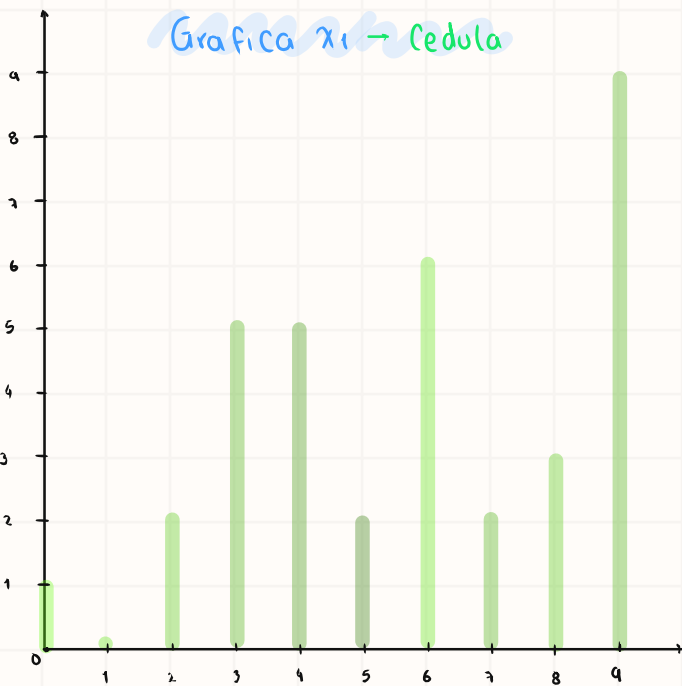
	1	0	2	6	5	5	2	1	8	2
5	5	0	10	30	25	25	10	5	40	10
6	6	0	12	36	30	30	12	6	48	12
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
6	6	0	12	36	30	30	12	6	48	12
4	4	0	8	24	20	20	8	4	32	8
9	9	0	18	54	45	45	18	9	72	18



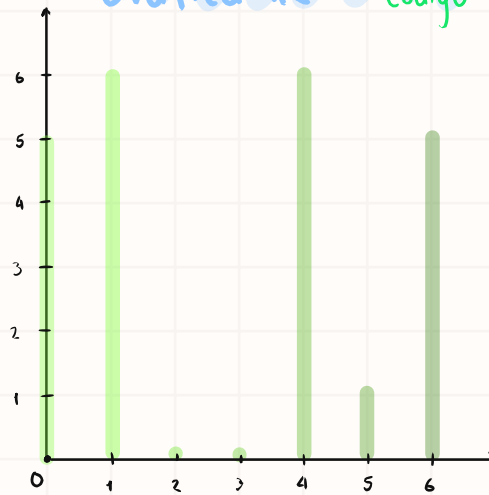
Graficas x_1 y x_2

Esteban Rey : • Cedula : ^{0 1 2 3 4 5 6 7 8 9}1025526239 $\rightarrow x_1$ y • Código : ^{0 1 2 3 4 5 6}5600615 $\rightarrow x_2$

Grafica $x_1 \rightarrow$ Cedula



Grafica $x_2 \rightarrow$ Código



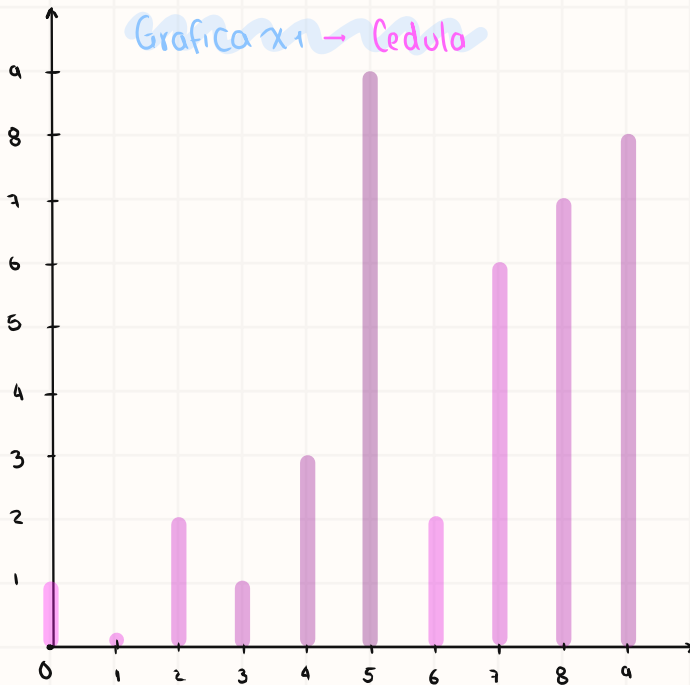
Correlación:

- $x_1[nT_s] = \cos(2\pi 100nT_s)$
- $x_2[nT_s] = \sin(2\pi 100nT_s)$
- $T_s = 1,25 \text{ ms}$

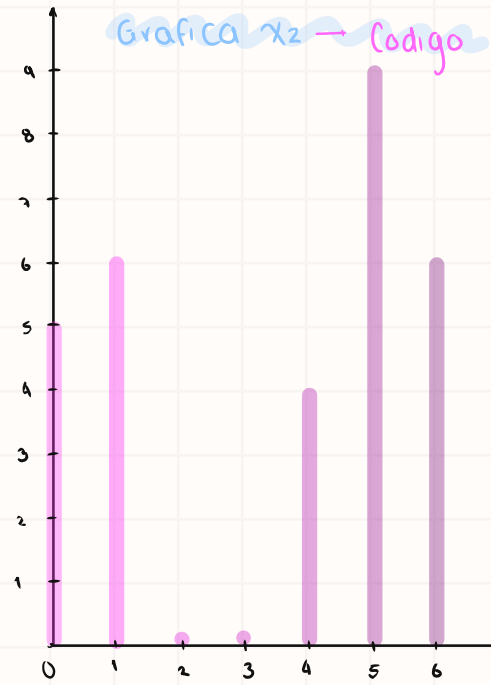
n	x_1	x_2
0	0	1
1	-0.233	0.9723
2	-0.454	0.890
3	-0.649	0.760
4	-0.809	0.587
5	-0.924	0.382
6	-0.987	0.155
7	-0.996	-0.019
8	-0.950	-0.309

Lizeth Garzon : • Cedula : ^{0 1 2 3 4 5 6 7 8 9}1021392678 $\rightarrow x_1$ y • Código : ^{0 1 2 3 4 5 6}5600496 $\rightarrow x_2$

Grafica $x_1 \rightarrow$ Cedula

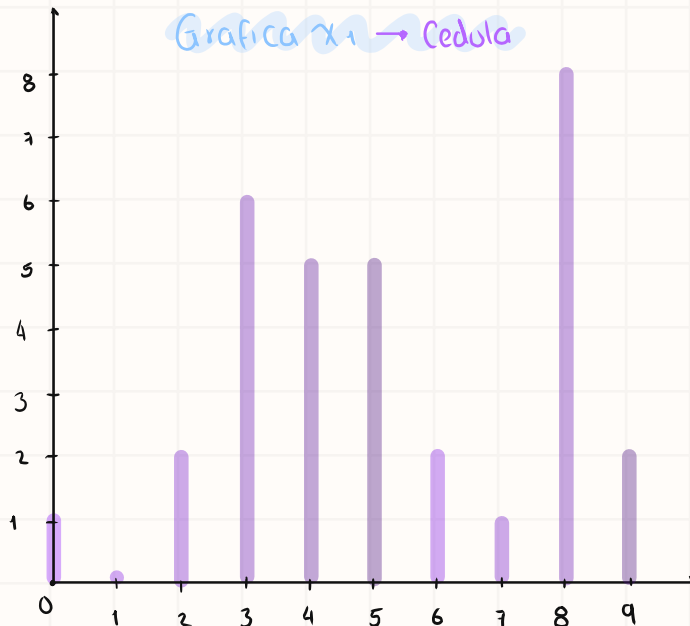


Grafica $x_2 \rightarrow$ Código



Valentina Vargas : • Cedula : ^{0 1 2 3 4 5 6 7 8 9}1026552182 $\rightarrow x_1$ y • Código : ^{0 1 2 3 4 5 6}5600649 $\rightarrow x_2$

Grafica $x_1 \rightarrow$ Cedula



Grafica $x_2 \rightarrow$ Código

