

Workshop: Finding Objects, then classes, then model

Problem

Create a digital system that centralizes and automates the recording of artisans's attendance, products, and sales, enabling efficient inventory control and the generation of detailed reports.

The system must:

- Record artisans' daily attendance and apply automatic financial penalties in case of absence.
- Allow the registration, modification, and deletion of products for each artisan.
- Record and update sales per artisan in real time, updating inventory accordingly.
- Provide filters by artisan and by date to simplify the search for specific products, sales, or attendance records.
- Generate monthly and personalized reports with key sales and attendance metrics.

Overview

The system focuses on recording and managing each artisan's products and sales in the market, considering the need to individually track each artisan's performance.

It includes attendance control, allowing the registration of arrival and departure times for each artisan.

To facilitate data analysis and decision-making, the platform offers filters by artisan and by date, which allow users to view inventory, sales, or attendance records specific to a selected artisan or time period.

The goal is to optimize the management of inventory, attendance and sales performance in the artisan market.

Background

Currently, the artisan in the Craft Market manually records attendance and sales, which causes human errors, confusion, and makes it difficult to produce accurate reports. This manual process also complicates the application of attendance related penalties and updating inventory after

each sale. To address these issues, a centralized digital system is proposed, which will: Replace manual list with real- time digital records.

Automatically manage attendance and apply penalties when artisan miss their assigned days

Keep inventory updated with each sale, avoiding discrepancies between stock and sales.

Generate accurate, monthly reports with comparative metrics for each artisan.

Table 1-Example of products by artisan

Artisans	Products	Stock	Unit price
Lourdes T.	Cedazo	8	\$ 12
	Cedazo Llaverero	5	\$ 3.5
	Guanga	1	\$18
	Cepillos	12	\$ 4
Guido P.	Cedazo Pichca	1	\$37
	Cedazo Sucta	2	\$30
	Cedazo Parejo	1	\$27
	Jarabe Agave (500ml)	5	\$10
Narcisa A.	Cintillos	10	\$5
	Cedazo	5	\$15
	Aretes	12	\$3
	Correa	1	\$20
Leonor C.	Cuchara	2	\$22
	Cedazo	5	\$10
	Sombrero	4	\$6
Katty L.	Aretes	10	\$4

	Pulsera	35	\$1
	Llavero	13	\$2.5

Analyst Comparison

To compare the artisans in the market, the system will use the daily recorded sales and attendance data. Each artisan will have a personalized summary that includes:

Sales: Records of all products sold, specifying quantity, unit price, and total sales per product.

Attendance: Records of the days the artisan attended and operated the craft Market.

Comparison Metrics:

Total Sales (TV): sum of all sales made by the artisan during the month.

Average Daily Income (ADI): total sales divided by the number of attendance days.

Total Number of Products Sold: The total units sold by artisan.

Best-Selling Product: product with the highest quantity of sales.

Penalties: The total amount deducted for days of absence, if attendance control is applied.

This comparison will help identify the most productive and responsible artisans, optimize inventory allocation, and improve decision-making in the management of the Craft Market.

Table 2-Example of stock and sales of artisans

Month: January					
Artisans	Products	Stock	Unit price	Sales made	Current stock
Lourdes T.	Cedazo	20	\$ 12	14	6
	Cedazo llavero	10	\$ 3.5	5	5
	Guanga	10	\$18	2	
	Cepillos	10	\$ 4	7	3
Guido P.	Cedazo Pichca	10	\$37	1	9
	Cedazo Sucta	10	\$30	2	8
	Cedazo Parejo	10	\$27	1	9

	Jarabe Agave (500ml)	20	\$10	5	15
Narcisa A.	Cintillos	10	\$5	10	0
	Cedazo	10	\$15	5	5
	Aretes	20	\$3	12	8
	Correa	10	\$20	1	9

