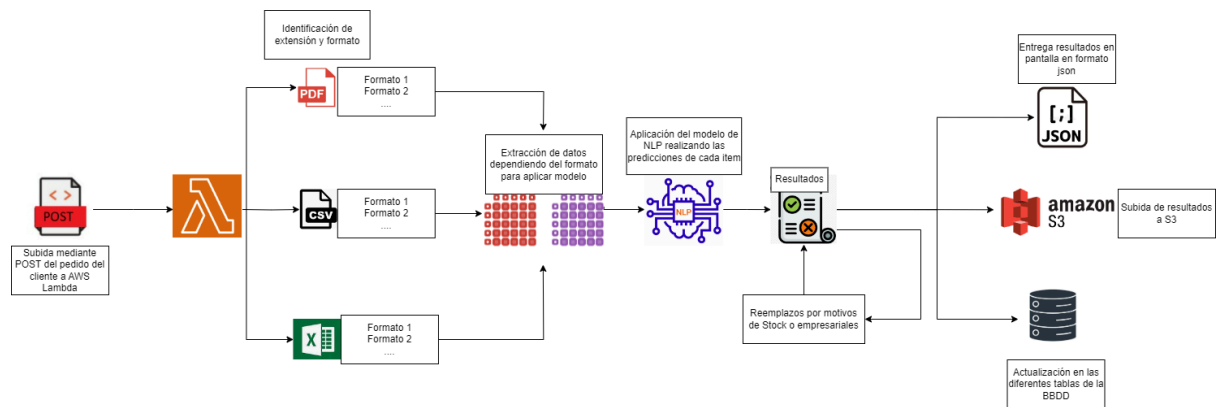


# Project Documentation

## Functional Diagram



## System Overview

The system was designed to process incoming orders through a **.html form** where the required data was uploaded. This data was then sent to an **AWS Lambda function**, which handled file identification (PDF, Excel, or CSV formats) and data adjustment to make it compatible with the predictive model.

The model itself was loaded from **Amazon S3**. Once loaded, predictions were made, and results were processed further. These results were checked against a **database in Amazon RDS** that we created, containing current orders, item codes, and stock levels.

- **If stock was available**, the system generated an offer based on the items requested.
- **If stock was unavailable**, the system substituted the item with a similar one (as defined by the company's item similarity criteria) to complete the final offer.

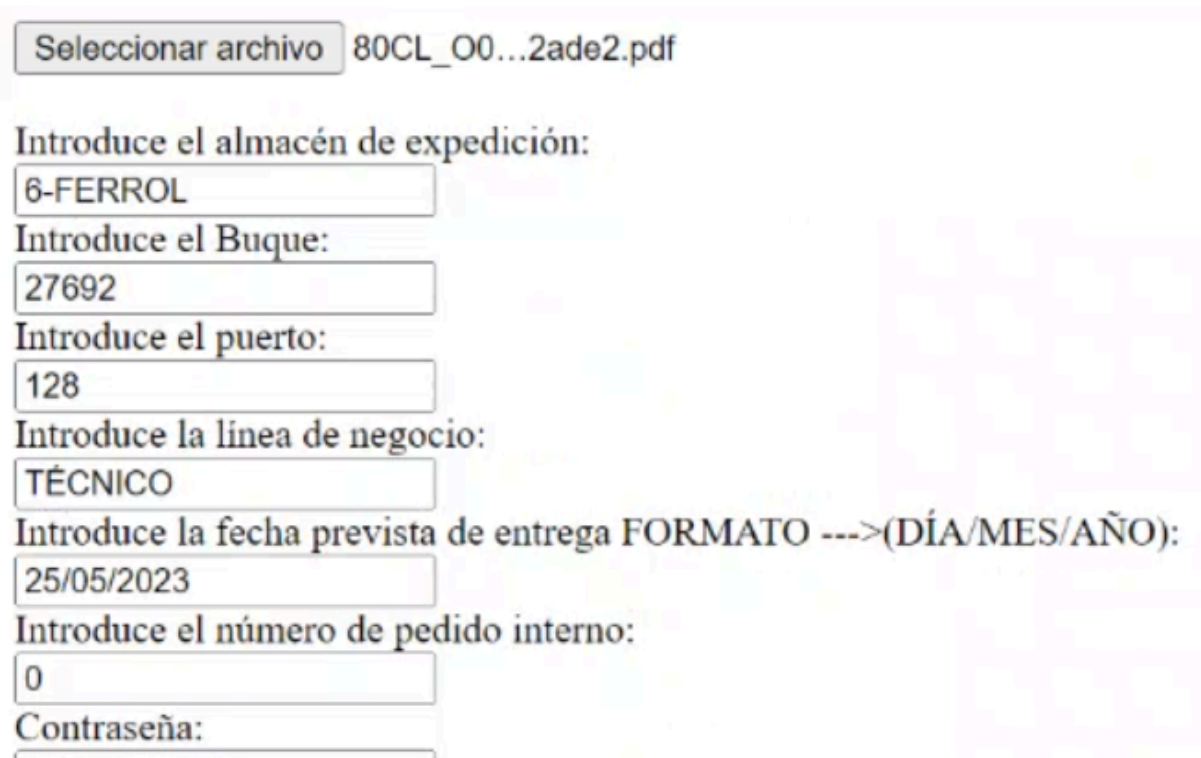
After these steps, the database was updated accordingly, the generated offer was saved to **Amazon S3**, and a **JSON file** was displayed on-screen for the operator to review.

---

# Usage Example

## 1. HTML Form

Below is the **.html form** used to submit orders to the system.



The screenshot shows a web form with a light pink background. At the top, there is a button labeled 'Seleccionar archivo' followed by the text '80CL\_O0...2ade2.pdf'. Below this, there are several input fields with labels in Spanish. The labels and their corresponding values are: 'Introduce el almacén de expedición:' with '6-FERROL', 'Introduce el Buque:' with '27692', 'Introduce el puerto:' with '128', 'Introduce la línea de negocio:' with 'TÉCNICO', 'Introduce la fecha prevista de entrega FORMATO --->(DÍA/MES/AÑO):' with '25/05/2023', 'Introduce el número de pedido interno:' with '0', and 'Contraseña:' with a series of dashes. The form is styled with a simple, clean layout.

Seleccionar archivo 80CL\_O0...2ade2.pdf

Introduce el almacén de expedición:  
6-FERROL

Introduce el Buque:  
27692

Introduce el puerto:  
128

Introduce la línea de negocio:  
TÉCNICO

Introduce la fecha prevista de entrega FORMATO --->(DÍA/MES/AÑO):  
25/05/2023

Introduce el número de pedido interno:  
0

Contraseña:  
-----

## 2. Input and Output Examples

### Example 1

The following images illustrate the **input of an order** and the corresponding **output generated by the system**.

Item Details									
S.No	Item Code	Item Description	Drawing Number	Part Number	Unit	Quantity	MD	SDoC	Remarks To Vendor
1	330661	SAFETY HANDLAMP RECHARGEABLE, LED HIPOWER MICA ML-800 ATEX		330661	PCS	3.000	No	No	
2	330841	CONNECTION INTERNATIONAL SHORE, WITH FURTHER DETAIL		330841	PCS	1.000	No	No	
3	338691	SIGN ISPS CODE RESTRICTED AREA, #8691GM 100X300MM		338691	PCS	5.000	Yes	Yes	
4	338695	SIGN ISPS CODE RESTRICTED AREA, #WV8695LQ 250X500MM		338695	PCS	2.000	Yes	Yes	
5	337700	SIGN DECK & ENGINE ROOM, OXYGEN #7700 100X300MM		337700	PCS	4.000	Yes	Yes	
6	337611	SIGN WHITE VINYL SELF ADHESIVE, 7611 200X150MM DANGER ELEC HAZ		337611	PCS	2.000	Yes	Yes	
7	337610	SIGN WHITE VINYL SELF ADHESIVE, #7610 200X150MM DANGER HI VOLT		337610	PCS	2.000	Yes	Yes	
8	336056	FIRE CONTROL SIGN, SMOKE DETECTOR 150X150MM		336056	PCS	20.000	Yes	Yes	
9	336043	FIRE CONTROL SIGN, FIRE ALARM PANEL 150X150MM		336043	PCS	5.000	Yes	Yes	

1 of 3

10	331539	POSTER DRUGS & ALCOHOL WARNING, 297X210MM		331539	PCS	20.000	Yes	Yes	
11	335107	SAFETY SIGN START WATER SPRAY, 150X150MM		335107	PCS	5.000	Yes	Yes	
12	331564	POSTER MOORING #1064W, 480X330MM		331564	PCS	5.000	Yes	Yes	
13	331522	POSTER BUNKERING, #1022W 480X330MM		331522	PCS	5.000	Yes	Yes	
14	331523	POSTER POST OIL SPILL ACTIONS, #1023W 480X330MM		331523	PCS	5.000	Yes	Yes	

```
{
  "oferta": [
    {
      "ITEM DESCRIPTION": " safety handlamp rechargeable, led hipower mica ml-800 atex ",
      "prediccion": "PR43343",
      "QTY": "3000",
      "UNIT": "pcs",
      "probabilidad": 0.9895057082,
      "comentarios": "",
      "valid_accuracy": "true",
      "descripcion_es": "LINTERNA ATEX ANGULAR (EQUIV.WOLF TR-24 B) IECEX IP67, 3xR06",
      "descripcion_en": "INTRANT TORCH SAFETY (EQUIV.WOLF TR-24B) 3xAA, ANGLE ATEX, IECEX Z0 IP67"
    },
    {
      "ITEM DESCRIPTION": " connection international shore, with further detail ",
      "prediccion": "PR17006",
      "QTY": "1000",
      "UNIT": "pcs",
      "probabilidad": 0.9954687357,
      "comentarios": "",
      "valid_accuracy": "true",
      "descripcion_es": "CONEXION INTERNACIONAL 178 mm x 2 BSP",
      "descripcion_en": "INTERNATIONAL SHORE CONNECTION 178 mm x 2 BSP"
    },
    {
      "ITEM DESCRIPTION": " sign isps code restricted area, #8691gm 100x300mm ",
      "prediccion": "PR18109",
      "QTY": "5000",
      "UNIT": "pcs",
      "probabilidad": 0.9451405406,
      "comentarios": "",
      "valid_accuracy": "true",
      "descripcion_es": "SE\u00d1AL ISPS CODE RESTRICTED AREA 8691GM 100X300MM",
      "descripcion_en": "SIGN ISPS CODE RESTRICTED AREA, 8691GM 100X300MM"
    },
    {
      "ITEM DESCRIPTION": " sign isps code restricted area, #wv8695lq 250x500mm ",
      "prediccion": "PR37573",
      "QTY": "2000",
      "UNIT": "pcs",
      "probabilidad": 0.8479789495,
      "comentarios": "",
      "valid_accuracy": "true",
      "descripcion_es": "SE\u00d1AL IMO COD.ISPS & SEGUR. WV8695LQ RESTRICTED AREA 250X500MM",
      "descripcion_en": "SIGN ISPS CODE RESTRICTED AREA, WV8695LQ 250X500MM"
    }
  ],
}
```

## Example 2

Here is another example of order input and output.

	Pos	Item No.	Item Description	Content Qty	Content Unit	Qty	Unit
2							
8	60	400101270	Baking sheet, alum., 600x400x20mm			4	PCS
9	70	400101290	Cake pan spring release with 2 bases diam. 250 mm			2	PCS
10	80	400101315	Muffin pan, nonstick, 12 cups, 24x18cm			2	PCS
11	90	400102145	Insulated jug stainless steel, 1 ltr.			2	PCS
12	100	400113300	Cup hook			15	PCS
13	110	400111085	Plate soup, white, low, acropal, diam. 225 mm			20	PCS
14	120	400111125	Bowl, white, diam. 150 mm			20	PCS
15	130	400111135	Bowl glass, diam. 100 mm			15	PCS
16	140	400109060	Steak knife stainless steel, standard, 220 mm			15	PCS
17	150	400106115	Peeling knife stainless steel, standard quality, 80 mm			2	PCS
18	160	400106120	Hand peeler, metal, 170 mm			2	PCS
19	170	400108180	Ice cream scoop, stainless steel, diam. 50 mm			2	PCS
20	180	400105240	Spatula wood, 300 mm			4	PCS
21	190	400105242	Spatula nylon, 310 mm			2	PCS
22	200	400105260	Can opener hand type, standard, 180 mm			1	PCS
23	210	400103075	Chopping board plastic, 600x400x20 mm			4	PCS
24	220	400105200	Dough scraper metal, 150x70 mm			2	PCS
25	230	400104110	Flour strainer stainless steel, diam. 280 mm			1	PCS
26	240	400105157	Roast and barbecue cord	60 mtr		2	ROLL

```
{
  "ITEM DESCRIPTION": "Cover cartridge for printers \"BROTHER MFC - L2710DN\"",
  "prediccion": "PR19868",
  "QTY": 2,
  "UNIT": "PCS",
  "probabilidad": 0.9940456152,
  "comentarios": "",
  "valid_accuracy": "true",
  "descripcion_es": "TAMBOR BROTHER DR 2200",
  "descripcion_en": "DRUM BROTHER DR 2200"
},
{
  "ITEM DESCRIPTION": "Cartridge for printers \"BROTHER MFC - 7360 Ne\"",
  "prediccion": "PR19862",
  "QTY": 6,
  "UNIT": "PCS",
  "probabilidad": 0.8664906621,
  "comentarios": "",
  "valid_accuracy": "true",
  "descripcion_es": "TONER BROTHER TN-2210 NEGRO",
  "descripcion_en": "TONER CARTRIDGE BROTHER TN 2210 BLACK"
},
{
  "ITEM DESCRIPTION": "Cover cartridge for printers \"BROTHER MFC - 7360 Ne\"",
  "prediccion": "PR19868",
  "QTY": 3,
  "UNIT": "PCS",
  "probabilidad": 0.9869863391,
  "comentarios": "",
  "valid_accuracy": "true",
  "descripcion_es": "TAMBOR BROTHER DR 2200",
  "descripcion_en": "DRUM BROTHER DR 2200"
},
{
  "ITEM DESCRIPTION": "Beseitigt verstopfungen Rorax",
  "prediccion": "PR14733",
  "QTY": 12,
  "UNIT": "PCS",
  "probabilidad": 0.4091038108,
  "comentarios": "",
  "valid_accuracy": "false",
  "descripcion_es": "BOTA AGUA CA\u00d1A ALTA N\u00ba42 (26cm)",
  "descripcion_en": "BOOTS RUBBER CLOTH LINING LONG No 42"
},
{
  "ITEM DESCRIPTION": "Natrium hydroxid(Atznatroh)",
  "prediccion": "PR14733",
  "QTY": 12,
  "UNIT": "PCS",
  "probabilidad": 0.4091038108,
  "comentarios": "",
  "valid_accuracy": "false",
  "descripcion_es": "BOTA AGUA CA\u00d1A ALTA N\u00ba42 (26cm)",
  "descripcion_en": "BOOTS RUBBER CLOTH LINING LONG No 42"
}
```

