



Diseño de Aplicaciones web

Avance de evidencia 1

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Challenge 1

Halcon” is a construction material distributor that requires a web application to automate its internal processes. After an interview, the client's needs are as follows:

- A web application that allows their customers to see the status of their orders from a main screen where the customer enters a **customer number**, and an **invoice number**. The information to be displayed is the status and, in case of having a status of "Delivered", show the photo of the evidence that it was delivered. The **statuses** are as follows:
 - **Ordered**: when a material is ordered, and the sales executive enters it into the system.
 - **In process**: when the order is in stock, and is being prepared to go on route or, failing that, when it is not in stock and must be purchased from an external supplier.
 - **In route**: when the order has been routed for distribution.
 - **Delivered**: when the order has been delivered to the customer's premises.
 - The personnel working in the company can access an administrative Dashboard to carry out their respective activities. This requires the following:
 - That the system brings by default an administrative user, which will be able to register new users and assign roles to the users.
 - The roles are the departments (important: customers will not be able to register):
 - **Sales**: those in charge of taking orders from customers.
 - **Purchasing**: in case of not having any material, these are the users who manage the purchase of materials.
 - **Warehouse**: who manage the warehouse and prepare the orders for routing, they also inform Purchasing about non-existent or low stock materials.
 - **Route**: who oversee distributing orders to customers.
 - The life cycle of an order is respected:
1. A customer calls the company to place an order.
 2. The salesperson takes the order and assigns a new entry to the platform, which must contain the following:
 - Consecutive **invoice number** to which the order will correspond.
 - **Name or company name** of the customer placing the order.

- **A unique customer number** to be assigned arbitrarily.
 - **Fiscal data of the client** for the filling of the physical invoice that later will be sent by e-mail (the application will not send invoices, each order is linked with an invoice number, but a person of administration oversees making the invoices separately).
 - **Date and time** of the order.
 - **Delivery address** of the order.
 - A field to enter any notes or extra information.
3. The default status that the order acquires after it is raised is "**Ordered**" at that time the order should be visible to all employees of the company.
 4. A warehouse person should take care of the order and change its status to "**In process**". Once he/she has finished gathering the materials (internal warehouse or by arranging with purchasing the acquisition of the missing product), he/she changes the status to "**In route**" and, in turn, physically loads a unit together with the carrier.
 5. **The person on the route must take a photo of the loaded unit and upload it to the platform** (consider that the upload photo option should only be visible to people in the Route department).
 6. Upon delivery, the operator **must take another photo of the unloaded material and upload it to the platform** as evidence of delivery.
 7. Once the material is delivered, the status changes to "Delivered".
 - A screen where **all orders are listed**, with the possibility to search for orders by **Invoice Number, Customer Number, Date or Status**.
 - When an order is accessed, it can be modified or deleted logically, it is not deleted from the database, but a status is set so that it is not displayed together with the other orders.
 - A screen where the deleted orders are displayed, with the possibility to edit and restore them.

Deliverable(s)

Perform the analysis and interpretation of the problem and start the project; to do this you must do the following:

- Create the Github repository of the project.
- The work methodology that you're going to use for the planning and execution of the project will be SCRUM.

Planning of the project:

Forming the Scrum Team: Identify the team members who will be involved in the project. This typically includes a Scrum Master, who facilitates the Scrum process, a Product Owner, who represents the stakeholders and manages the product backlog, and the Development Team, who are responsible for delivering the increments of the product.

Product Backlog Creation: The Product Owner, in collaboration with stakeholders, creates a prioritized list of all the features, enhancements, and fixes that need to be implemented in the project. This is known as the Product Backlog.

Sprint Planning: At the beginning of each sprint, which is typically a short time frame (e.g., 1-4 weeks), the Scrum Team conducts a Sprint Planning meeting. During this meeting, the Development Team selects items from the Product Backlog that they believe they can complete within the sprint. They break down these items into smaller tasks and estimate the effort required.

Daily Stand-ups: Every day during the sprint, the Development Team holds a Daily Stand-up (or Daily Scrum) meeting. Each team member shares what they worked on yesterday, what they plan to work on today, and any blockers or impediments they're facing.

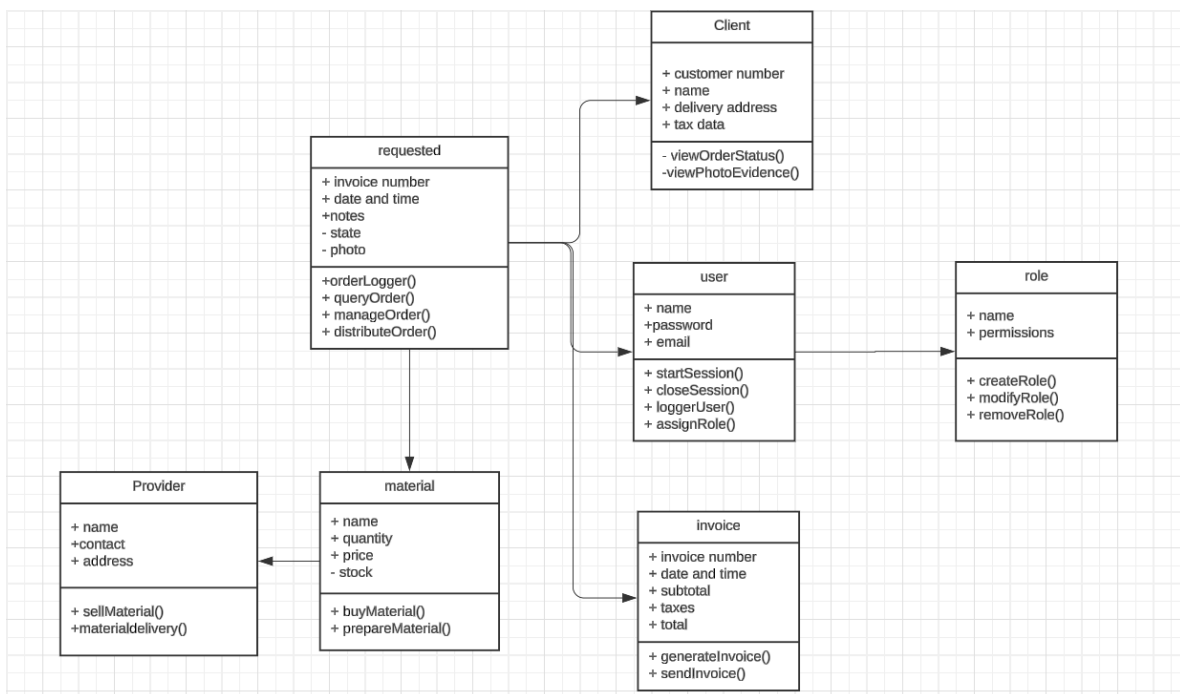
Sprint Execution: The Development Team works on the tasks identified during Sprint Planning. The Scrum Master ensures that the team has everything they need and removes any obstacles that may hinder progress. The Product Owner is available to clarify requirements and answer questions.

Sprint Review: At the end of the sprint, the Development Team presents the completed work to the Product Owner and stakeholders during the Sprint Review meeting. Feedback is gathered, and any necessary adjustments are made to the Product Backlog.

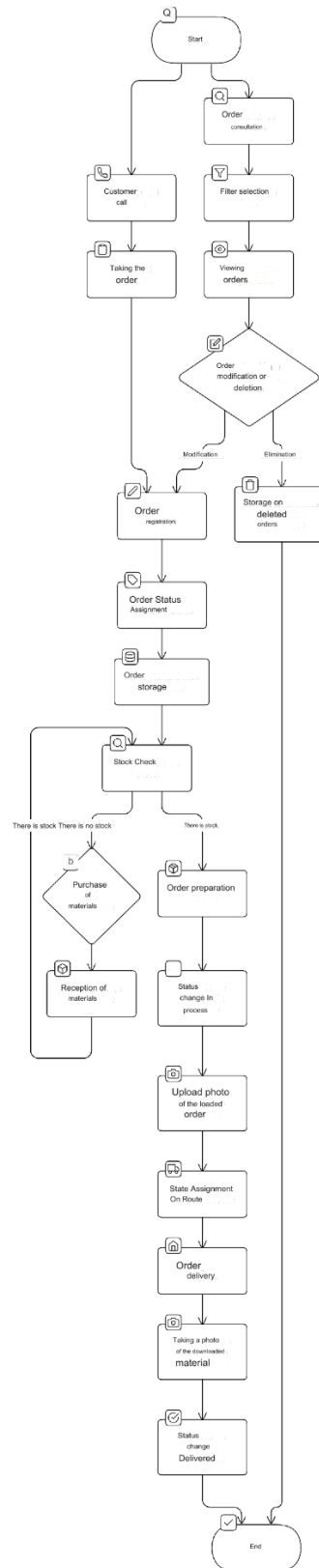
Sprint Retrospective: After the Sprint Review, the Scrum Team holds a Sprint Retrospective meeting to reflect on the sprint process. They discuss what went well, what could be improved, and come up with action items for making adjustments in the next sprint.

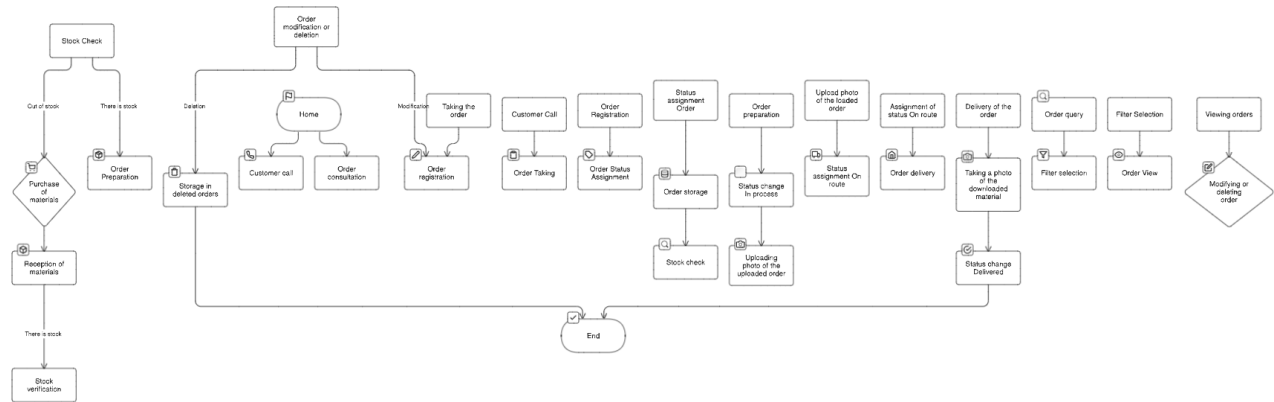
Repeat: The cycle then repeats, with the next sprint starting immediately after the previous one ends.

- Design the diagrams that will help you to describe graphically how the web application will behave:
 - **Class diagrams**



- Activity diagrams

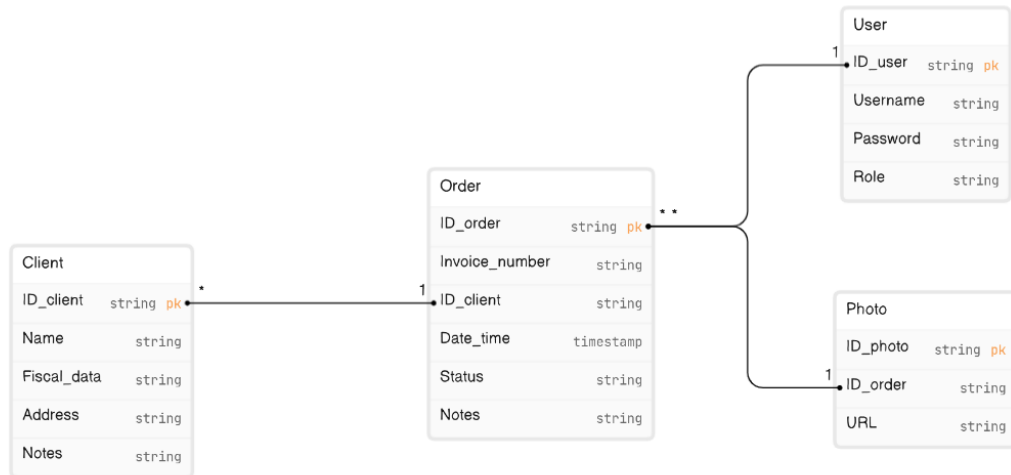




Note: Both diagrams are similar but different versions of the web application activity diagram.

- Choose the database and its respective ER diagram containing all the entities with their attributes, and the way they are related.

To implement our web application, we agree to use a relational database such as MySQL or SQLite, as these databases are capable of handling relationships between entities and meet the requirements of our web application. In addition, we can say that in MySQL you can make an open-source relational database and that it is widely used in web applications. It is compatible with a wide range of operating systems and programming languages. On the other hand, SQLite is a lightweight database that can be easily integrated into web and mobile applications. It is ideal for small to medium-sized applications and does not require a separate database server.



diagram_Entity Relationship

Eraser ERD:

- Logo of the application.



- Mockup of every single screen of your app.

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WWW.HALCON.COM.

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ENTER A CUSTOMER NUMBER:

ENTER AN INVOICE NUMBER:

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ORDER DETAILS

STATUS: IN ROUTE

DESCRIPTION: YOUR ORDER HAS BEEN ROUTED
FOR DISTRIBUTION

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➤

ORDER DETAILS

STATUS: DELIVERED

DESCRIPTION: YOUR ORDER HAS BEEN
DELIVERED SUCCESSFULLY



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ANTHONY MILLER

ROLE: ADMIN

➤

REGISTER NEW USER

ASSIGN A USER ROLE

Choose a Role

Sales

Purchasing

Warehouse

Route

Confirm new user

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WWW.HALCON.COM.
RODRIGO MIRELES ROLE: SALESPERSON

ORDER PLACED !
ASSIGN THE FOLLOWING FIELDS TO THE ORDER
CONSECUTIVE INVOICE NUMBER:
COMPANY NAME:
UNIQUE CUSTOMER NUMBER:
FISCAL DATA:
DATE AND TIME:
DELIVERY ADDRESS:
EXTRA NOTES OR INFORMATION:

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WWW.HALCON.COM.
EDUARDO FERNANDEZ ROLE: ROUTE


ORDER STATUS: IN ROUTE
TAKE A PHOTO OF THE LOADED UNIT AS
EVIDENCE AND UPLOAD IT HERE:

 Upload Image

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WWW.HALCON.COM.
EDUARDO FERNANDEZ ROLE: ROUTE

ORDER STATUS: IN ROUTE
TAKE A PHOTO OF THE UNLOADED MATERIAL AS
EVIDENCE AND UPLOAD IT HERE:

 Upload Image

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WWW.HALCON.COM.

ORDER STATUS: DELIVERED
Search order by: Invoice N°
ORDER HISTORY:
ORDER 1
ORDER 2
ORDER 3



ORDER NUMBER 117

Modify

Delete



DELETED ORDERS:

ORDER 4	Edit	Restore
ORDER 5	Edit	Restore
ORDER 7	Edit	Restore
ORDER 8	Edit	Restore