Loaner Vehicle Application

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LVA PORTAL

The LVA portal is where users will request vehicles, view reports, and access the knowledge base.

COMPANY & HEADER STYLES

I created the fictitious Loan Flex company that provides flexible vehicle loans to contractors. The logo at the top is a PNG with a transparent background, which provides flexibility to the design if the header background needs to be updated at a later time. The header background is a gradient CSS style included in a custom portal theme I designed for the application.

HEADER MENU

From the header menu, a logged in user can view their requests, surveys, profile settings, cart, and available tours.

MAIN MENU

The main menu includes custom styles and utilizes a CSS transition for an animated hover effect. From the main menu a user can loan a vehicle, view the loaner vehicle request process document in the knowledge base, view available vehicles by make, or go directly to the knowledge base.

SEARCH

For the search, AI wasn't available for the PDI, so I configured the zing search to display records from the Loaner Vehicle Catalog, along with the service catalog and knowledge base. Using a business rule to concatenate the vehicle make and model as a display value made the search results and the catalog item more user friendly.

ICON LINKS

The icon link widgets are also using a custom hover transition as well as a google font. These links provide another option for requesting a vehicle, viewing the request process, or to view availability reports.

VEHICLE REPORTS

Reporting is available on the right side of the page, displaying the total number of vehicles available, the number of vehicles being serviced, and a report showing the status of vehicles by make.

PORTAL FOOTER

The footer contains contact information, copyright, and social links with custom theming.

CUSTOM WIDGET

The 'Vehicle Availability by Status' section is a custom widget I built from scratch. It pulls all vehicles with a status of 'available' by default, and buttons provide the option to view vehicles by 'unavailable' and 'decommissioned' statuses as well. I made a tour for this widget.

The button style for the selected status is set to disabled, so that it cannot be clicked.
Vehicles with an 'available' status have a 'Loan Now' button that takes the user directly to the catalog item and populates the request with that particular vehicle.

The main menu item, 'Available Vehicles by Make' will update the custom widget with the 'vehicle make' a user selects. If the user were then to select 'unavailable' or 'decommissioned' vehicles, it will show only the vehicles with the 'vehicle make' they had previously selected. I would like to add pagination and limit the number of results displayed in a future release.

CATALOG ITEM

When requesting a vehicle, the 'Requested by' field automatically populates the logged in user and is read-only.
When a user is selected from the 'Requested for' field, their 'Office Location' is automatically populated using a UI script and script include.

REQUEST LOANER VEHICLE FLOW

Placing the order kicks off a flow that gathers the catalog variables, updates the requested item record with the correct 'Requested for' user, creates a Vehicle tracker record, and sets up approvals.

If approved, a catalog task is created with the information from the catalog variables and assigned to the Loaner Vehicle Delivery group. Then the vehicle tracker record 'Vehicle status' is set to 'Out on Field'. After the work is complete and the catalog task is closed, the requested item state will be set to 'Closed complete'.

If the approval is rejected, the requested item is closed as incomplete.

Flow stages of 'Pending Approval', 'Approved', and 'Rejected' were added at appropriate places so that the correct stages would be reflected in the request.

TABLES & MODULES

This scoped application contains 3 custom tables, and related modules:

Loaner Vehicle Catalog:

Contains detailed information including images of each vehicle and its status. Data was initially imported into this table from a spreadsheet, and vehicle images added.

Vehicle Tracker:

A tracking record is created for every approved vehicle request containing the person loaning the vehicle, the location, status of the vehicle, and relevant dates.

If the Vehicle Status on the Vehicle Tracker is Pending Release, Out on Field, Returned for Inspection or Sent for Servicing, the status of the associated Vehicle will be set to 'Unavailable' via a business rule.

Vehicle Servicing:

If a vehicle tracker is set to 'Sent to Servicing', a related record is automatically created in the Vehicle Servicing table if there is not already an open servicing record. This is done via a business rule.

There is also a business rule that keeps users from closing a Servicing ticket when the Vehicle Status is 'In Service'.

When a Servicing ticket is closed, the status of the vehicle on the Tracker ticket will be set to match the status on the Servicing ticket, and the Tracker ticket will automatically be closed as well.

FORM UI ACTIONS & POLICIES

Return to Warehouse button (Vehicle Tracker form)

Only show this button when the Vehicle Status is Returned for Inspection, and the Tracker Status is Open.
When users click this button, Set the 'Vehicle Status' to 'Returned to Warehouse'.

Send to Repair button (Vehicle Tracker form)

Only show this button when the Vehicle Status is 'Returned for Inspection', and the Tracker Status is 'Open'.
When users click this button, Set Vehicle Status to 'Sent for Servicing'.

Vehicle Servicing

Disallow ticket closure when 'Vehicle Status' is 'In Service'.

ACLs

Access controls are configured so that all users can view the Catalog and Tracker tables. Only users with a specified role for this application can modify these tables and view the Vehicle Servicing table. Only admins have access to delete records on any of these tables.

GROUPS

'Loaner Vehicle Warehouse Managers' group has access to create records in all 3 tables.
'Loaner Vehicle Maintenance Team' has access to the 'Vehicle Servicing' table.
'Loaner Vehicle Delivery' group contains the ITIL role.
'Loaner Vehicle Approvers' group contains the approver_user role.

USERS

System User (no role or internal role)

1. Linda Jones (snc_internal)

Loaner Vehicle Delivery

1. Michael Jones
2. Mary Smith
3. William Brown

Loaner Vehicle Approvers

1. Robert Williams
2. John Johnson

Loaner Vehicle Maintenance Team

1. Elizabeth Brown

Loaner Vehicle Warehouse Managers

1. Jennifer Williams

EMAIL NOTIFICATION

There is a Vehicle request email notification that is automatically sent out once the vehicle has been delivered and the request is complete. It is personalized with the user's name, location, and contains the request number, delivery date and delivery information.

FUTURE ENHANCEMENTS

The specifications for this project did not include the CMDB. Future enhancements would include adding the vehicles as CIs into the CMDB would be a modification I would make. The 'CMDB CI Class Models' plugin would be a great way to include vehicles as CIs.

Rebuild the 'Available Vehicles by Make' drop-down menu so it's within the widget on the page instead of the navigation menu. I would also like to include pagination in the widget.

That's all I have for now. You're welcome to post comments and questions if you like. Thank you for watching the demo of my ServiceNow Loaner Vehicle application!