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Situation:

V2Soft Company is a staffing company for different clients such as Ford Motors. My manager is Micah Tessler and, in the team, there are 12 developers, 1 product owner, and 1 Manager.

The client Ford Motors contracts V2soft for the project and the team has different areas such as development, QA, etc.

Ford Motors is a big company which the main brand is located in Detroit Michigan and its main business is selling cars

Project: Lofile (login and profile)

Account Manager allows both "Ford" and "Lincoln" customers (i.e., people or companies who have a loan or lease on vehicles for either Ford or Lincoln brand) to manage their payments, including schedule one-time payments, enrolling in auto-pay, etc.

The Account Manager team provides an Angular UI for Front-end and a Spring Boot Java API and micro-services for Back-end. The server is JBOSS and IBM DB2 as a RDBMS database is using.

We are using "Github" as a source control tool and Jenkins for CI/CD for this project.

 In this project, my team is working to transfer from the Legacy(classic) system to the new GUX(Global User Experience) System, along with changing the login system to "Single Sign-On" login.

With the Single Sign-On approach, all the customers of different Ford applications such as "Ford Credit" customers, "Ford Owner" Customers, "Ford Pass" customers, and "Ford Pay" can log in with one "Username" and "password" to access to all the Ford applications.

Tasks Routine:

We are working by "Pair Programming" technique in the TDD software developing approach to develop higher-quality code. So, as I learned in Software Engineering, TDD is a development process in which you must first write unit tests before coding, to specify and validate what the code will do. Pair programming is a developing technique in which two developers work together at one workstation, The driver, writes code while the other, the navigator, reviews each line of code as it is typed in.

In this project, we use the "ping-pong" pattern for pair programming, in which, developers frequently switch their positions as a navigator or driver, and one writes the test case and the other writes the code to pass the test case.

Working with the Scrum project management framework, every morning we have a "Daily Stand Up" Meeting. Checking the tasks on the Rally card tracking tool.

In the "Iteration Planning meeting" Every task after extracting from a "Feature" is in the state of "Defined". And will give it a point as a "Plan Estimate".

Then it will be picked up by a pair of developers then will be in the "In-Progress" state.

After completion of coding will be moved to the state of "Dev Review" which other pair of developers will check the code again and add comments or updates, to it if necessary.

After approving the task in "DevReview", it will move to the "Business Verify" state, in which the task will be tested in functionality by Product Owners. And if accepted will go to the state of "Business approved".

In the end, the "Product Manager" will check and verify the task again and if accepted will move to the state of "Accepted"

Task:

We were requested to create a new home page for Ford and Lincoln customers. this task was described as a Feature which consists of around 12 User story to completion. This home page was supposed to be shown for just a specific part of customers.

Since in every iteration, the team completed part of this feature and after every iteration, we deploy the complete code on the production, although the feature has not been completed yet.

But before completion, it should not be shown to the customer. After completion, the homepage should be shown to just Ford customers of some specific states and after getting customer feedbacks and finalizing it should be shown to All Ford and Lincoln customers. We should find a solution for redirection to "new homepage" or "old home page", first of all, to be based on locations and then based on brand.

My partner and I as a pair, first during a SPIKE card, should examine the possibility, find a solution for handling it, and then start implementation.

Action:

For that, we defined some front-end toggles. Based on that toggle we decide to redirect the request to the new homepage or stay on the previous homepage.

We defined two toggles one for Ford and one for Lincoln separately, as a boolean value in the properties file.

Then since we are using angular for the front-end, in homepage guard we specified the condition that if the toggle is off then return false so redirect to old home page.

In this case, when we want to flip the toggle we don't need to build and deploy the whole project and we can active or active homepage by just changing the property file.

Before finalizing Lincoln's toggle was off and just Ford's toggle was on.

Now we should specify Ford customers of which state should be able to see that.

For this problem, we again used the property file and entered the latitude and longitude of the desired states in it.

Then after the first request of the customer, we got the latitude and longitude of the browser location.

In the homepage guard, we check that if the customer's location was in the range of the desired state, it redirects the customer to the new homepage otherwise returns the old homepage.

Result:

For the problem of redirection to "new homepage" or to "old home page", based on parameters of "Brand" and "customer location",

we solved this problem with toggles and properties file which are highly used in Spring-boot projects and the page "Guards" of Angular which is used for user authorization and controlling access to a page.

With this approach easily and with the least amount of coding, we managed access to the homepage without any failure or latency.

The most advantage of this approach was that after any change in toggle or the specified state we didn't need to build and deploy, and changes at the moment reflect in the application.