Machine Reasoning Workshop

KIE

Enhanced Mortgage Process

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[Please note that all the data that will go through the system will not be recorded or used in anyway. Everything is used solely just for demonstration purpose]

**Enhanced Version**

The system that we present is an enhanced version of the basic workshop system of mortgage process. Many additional features has been added to make the process looks more realistic (and more complicated). There are 4 main features that has implemented in this system:

1. Citizenship ID and its validation

User now will be able to key in his citizenship particular details. This is also another important factor to consider when deciding application status for a company. This feature also come with basic validation to validate that the user has correctly give the data.

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2. Enhanced Decision Tree Machine Reasoning approval based on knowledge discovery from more complicated data.

Now with citizenship details, we can further improve machine reasoning rules that will take into account of applicant nationality. We try to simulate the knowledge discovery process of the data by generating random data and use Orange software to generate new decision tree. This new decision tree is far more complicated than the basic one. The new version then is implemented into KIE process with Guided Decision Tree.

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3. Mocking documents approval process

Here we also try to simulate the process of documents submission and verification. However there is no machine reasoning added into this feature. So the process is still a manual parallel process together with application process.

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4. Email Notification feature

The system is capable of sending a rejected notification email to the application together with a simple reason (whether it is rejected due to documents or application itself).

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**Limitations and Improvements**

Due to limited time constraint and manpower, there are still lot of improvements that can be done. Here are some list of to do that can be done immediately to further improve the system:

1. Email validation process.

Currently there is no email validation process. It will be useful to add validation to ensure the email is correctly formatted.

2. Machine Reasoning for Documents Approval

Obviously we can try to add machine reasoning system in the documents verification process itself.

3. Gracefully handle the errors when sending emails

Currently the whole process task might break in case email cannot be sent. This is bad and should be fixed immediately. One can catch the error and then silent it so that the process can finish properly.

4. Email template

As of now there is now good template for the email. We can write one in the future for nice email.