

Credit Card

Description

In the Credit Card case study scenario a process of an application for a credit card is described. When a customer sends a completed application to the bank, the credit card release procedure is started. At the beginning, the application form is received and registered by the system. Then, a credit rating calculation takes place to determine the possible credit card limit. The next stage of the process is verification using various databases. Positive verification means that the credit card type should be determined and the message about the granted credit card should be sent to the customer. If the customer has low credit rating or the verification is negative, the customer should receive refusal information.

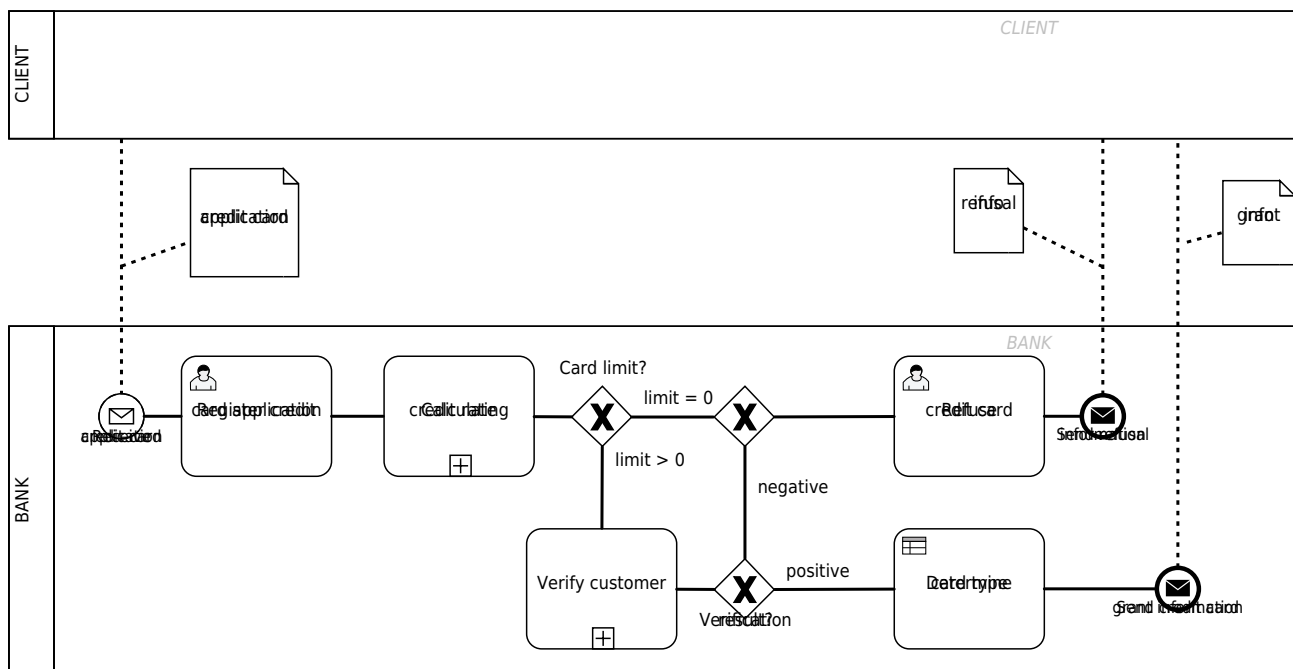
Source: Nalepa, G.J., Kluza, K., Ernst, S.: *Modeling and Analysis of Business Processes with Business Rules*. In: *Business Process Modeling: Software Engineering, Analysis and Applications*. New York, Nova Science Publishers, pp. 135–156 (2011)

Model

BPMN Diagram types: Process,

Source files: [creditcard.sgx](#), [creditcard.bpmn](#) [creditcard-all.pdf](#)

Diagram files:



, [creditcard.pdf](#)



Subprocesses

L.p.	Name	Model
1	Calculate credit rating	creditcard-1.png
2	Verify customer	creditcard-2.png

Calculate credit rating



Verify customer



Model logic

Model metrics

Main process:

Abbreviation	Name	Value
CNC	Coefficient of Network Complexity	1.38
IC	Interface Complexity Metric	20.0
NOA	Number of Activities in a Process Metric	5.0
NOAC	Number of Activities and Control Flow Elements in a Process Metric	11.0
NOAJS	Number of Activities, Joins and Splits in a Process Metric	8.0
DSM	Durfee Square Metric	3.0
PSM	Perfect Square Metric	4.0
ALL	All Elements	28.0

Calculate credit rating:

Abbreviation	Name	Value
CNC	Coefficient of Network Complexity	1.56
IC	Interface Complexity Metric	7.0
NOA	Number of Activities in a Process Metric	6.0
NOAC	Number of Activities and Control Flow Elements in a Process Metric	10.0
NOAJS	Number of Activities, Joins and Splits in a Process Metric	8.0
DSM	Durfee Square Metric	2.0
PSM	Perfect Square Metric	4.0
ALL	All Elements	24.0

Verify customer:

Abbreviation	Name	Value
CNC	Coefficient of Network Complexity	1.57
IC	Interface Complexity Metric	16.0
NOA	Number of Activities in a Process Metric	4.0
NOAC	Number of Activities and Control Flow Elements in a Process Metric	10.0
NOAJS	Number of Activities, Joins and Splits in a Process Metric	7.0
DSM	Durfee Square Metric	2.0
PSM	Perfect Square Metric	4.0
ALL	All Elements	21.0

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