

ATM Project Handout 4-2
Use Case Report: Identify Customer

Version 1.0

Introduction

This is an example of what a use case report might look like. In this example, we show the report for an abstract use case.

There are many styles of writing use cases. We show one style here, based on the template and guidelines for a use-case report in the Rational Unified Process.

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Revision History

Date	Version	Description	Author
15/03/2000	3.1a	Revised format for RUP 2000	J. Bell

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Use Case Report: Identify Customer

1. Use Case Name: Identify Customer

1.1 Brief Description

This use case describes how an ATM verifies the identity of a Bank Customer.

2. Flow of Events

2.1 Basic Flow

1. Insert Card

This use case begins when the Bank Customer inserts a Bank Card in the card reader on the ATM machine. The ATM validates the card.

2. Enter PIN

The ATM asks for the customer PIN code. The Bank Customer enters the PIN code. The ATM verifies the PIN with the Bank Consortium.

[There are also a number of general error cases specified in this description.]

2.2 Alternative Flows

2.2.1 Not a valid card

In Step 1, Insert Bank Card, of the basic flow, if the card is not valid it is ejected to the Bank Customer with a "sorry not a valid card" message. The use case ends.

2.2.2 Stolen card

In Step 1, Insert Bank Card, of the basic flow, if the card is on the list of lost cards then the card is kept by the ATM. The video camera is turned on. An alarm is sent to the Police alarm central. The use case ends.

2.2.3 Card stuck in card reader while reading card

In Step 1, Insert Bank Card, when the magnetic strip is read, the card gets stuck. An alarm is then sent to the maintenance crew and the Bank Consortium. The local video camera starts recording. The ATM displays a warning message to the Bank Customer. The use case ends.

2.2.4 Wrong PIN

In Step 2, Enter PIN, of the basic flow, the PIN is wrong. The ATM displays the message "wrong PIN" to the Bank Customer. The Bank Customer has three tries to get it right. If the Bank Customer correctly enters the PIN, the basic flow resumes after Step 2. Otherwise the card is kept by the machine and the use case terminates.

2.2.5 No contact with Bank Consortium

At any time during the use case, if the ATM cannot contact the Bank Consortium then the ATM displays a message to the Bank Customer that the connection to the Bank Consortium was lost and 'Try again later', the Bank Card is returned, and the use case ends.

2.2.6 Card stuck in card reader while ejecting

At any time during the use case, if the card gets stuck while being ejected, the ATM will try to eject the Bank Card for 2 minutes. If it still can't eject the Bank Card, then it has to be kept by the ATM. An alarm is then sent to the maintenance crew and the Bank Consortium. The local video camera starts recording. The ATM displays a warning message to the Bank Customer. The use case ends.

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2.2.7 Card never removed from card reader

At any time during the use case, if the card has been ejected from the ATM and is still there after 30 seconds an attention sound shall be turned on.

If the card is still there after 55 seconds it is retracted and placed in the wastebasket. This has to be written to the log. Then the attention sound is turned off. The use case ends.

2.2.8 Out of paper

At any time during the use case, if the ATM tries to print a receipt and it is out of paper, the will issue a warning message to the Bank Customer that it is out of paper and that a receipt can be picked up at the Bank Customer's own bank during regular business hours. The ATM will send a message to the Bank Consortium that a receipt was requested but not printed. The ATM will continue to operate normally but will not print.

2.2.9 Breakin

At any time during the use case, if any of the ATM's shell protection sensors are activated, then the video camera begins recording, and an alarm is sent to the Police. All current data is written to the log record. This log record is also sent to the Bank Consortium. The ATM keeps the card and notifies the Bank Customer. The current transaction is terminated. The use case terminates.

2.2.10 Quit

At any time during the use case, the Bank Customer can quit. The transaction is stopped. If the ATM has already transmitted its request to the Bank Consortium, then the ATM sends a new message to the Bank Consortium to abort this transaction. The ATM records the aborted transaction in its log.

The Bank Card is ejected. The use case terminates.

2.2.11 No reply from User

At any time during the use case, if the system asks for input from the Bank Customer and (s)he doesn't reply within 30 seconds - then a warning sound will beep.

If there still is no reply for 25 more seconds, then this operation will be closed down and the ATM will put the card in the wastebasket. This will be registered on the log. The use case ends.

2.2.12 Power off

At any time during the use case, if the power goes down, then all activities are frozen and the card is mechanically ejected. If the ATM is in the process of dispensing money, the money dispenser just stops. The log record tells how many bills were already dispensed.

When the power comes back up, all partially dispensed bills are put in the internal wastebasket. The ATM notifies the Bank Consortium to synchronize the last withdraw. The ATM issues a warning message that the Bank Customer must visit the bank to finish receiving the cash. The use case ends.

3. Special Requirements

3.1 Time to process card

The ATM shall respond within .5 seconds after the Bank Customer inserts the card in the Card Reader.

3.2 Standard Card Format

The ATM shall recognize all Bank Cards that have magnetic strips encoded in Bank Association Standard format.

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4. Pre-Conditions

4.1 Bank Customer has a card

The Bank Customer must have a bank card in order to begin this use case.

4.2 ATM contains cash

The ATM must have cash available in the machine in order to begin this use case.

4.3 ATM has connection to Bank Consortium

The ATM must have a connection to the Bank Consortium in order to begin this use case.

5. Post-Conditions

5.1 Card return

At the end of this use case, either the Bank Customer will have their bank card returned or the bank card will be kept and the Bank Customer will be notified of where it will be sent.

6. Extension Points

None specified for this use case.

7. Relationships

7.1 Actors

The Actor starting this Use Case is:

None

Actor(s) also involved in this Use Case:

Bank Customer

Bank Consortium

Maintenance crew

Police alarm central

7.2 Associations TO other Use Cases

Use Cases included by this Use Case (outgoing Include associations)

None

Use Cases extended by this Use Case (outgoing Extend associations)

None

7.3 Associations FROM other Use Cases

Use Cases including this Use Case (incoming Include associations)

Transfer Funds

Withdraw Cash

Deposit Funds

Use Cases extending this Use Case (incoming Extend associations)

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None

8. Use Case Diagrams

[In most cases this would not show the base use cases, since the included use case does not know which use cases include it and it would take too much effort to maintain. They are included here to show completeness for this example.]

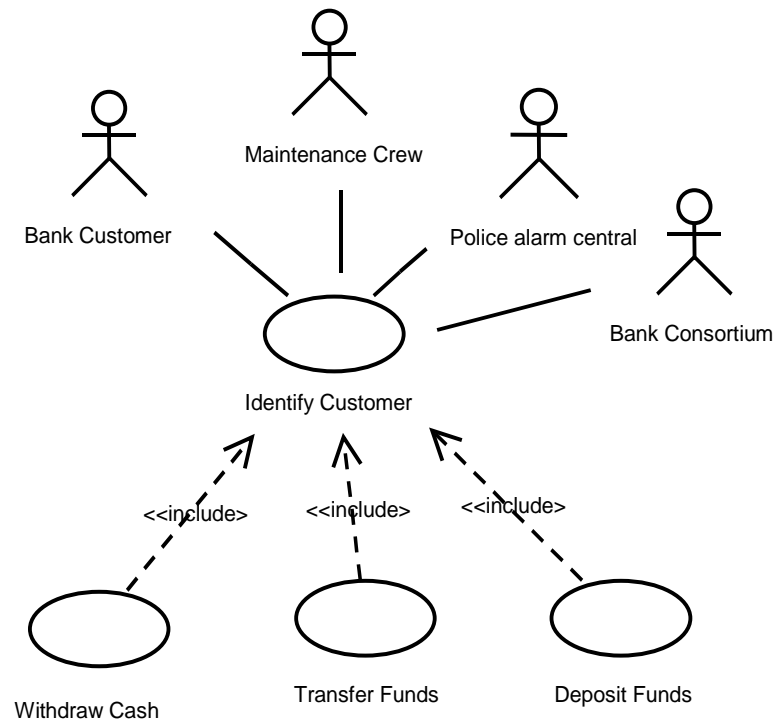


Figure 1: Local Use-Case Diagram

9. Other Diagrams

None specified for this use case.

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