

Use Cases & Use Case Level Test Cases

Lab Book

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Lab 1. Use Case Basics

Goals	<ul style="list-style-type: none">• Understand the process of creating Use Cases.• Learn to apply basic techniques for writing Use Cases.• Understand the application and write creative Use Cases
Time	90 minutes

1.1: Supporting document for Leave application

Please note that all fields in the leave application form are Mandatory fields.

A. Pre Condition:

- a. User is employee of company and having access to Intranet
- b. User has leave balance for applying a leave

B. Description: User wants to register for Leave (1/2 day or more)

C. Steps for accessing Leave application:

1. User will access Intranet
2. Click on Employee Corner
3. Click on Attendance System
4. Select Leave Application – Leave application form will be displayed (Diagram 1)

D. Procedure for applying for leave:

1. ½ day leave
 - a. Specify start date of the leave (Using Calendar Option – Diagram 2)
Dates are non-enterable and hence need to be selected from calendar.
 - b. If the half day is in the start date then choose check box for half day in start date
 - c. Specify in which session the half day is. (Default value is first session)
 - d. Specify end date of the leave. (Using Calendar Option – Diagram 2)
Dates are non-enterable and hence need to be selected from calendar.
 - e. Since you are applying for half day leave start date should be same as end date
 - f. If the half day is in the end date then choose check box for half day in end date (Make sure that half day in start date check box is not checked in this case)
 - g. Specify in which session the half day is. (Default value is first session)
 - h. Specify reason of leave from the given list of leaves
 - i. Specify Reason of leave
 - j. Submit the leave application
2. 1 or more than 1 day leave
 - a. Specify start date of the leave
 - b. Specify end date of the leave
 - c. Specify type of leave from the list provided
 - d. Specify reason of leave

- e. Submit the leave application
- f. 1 day leave can be applied by choosing Half day in start date second session and half day in end date first session

E. Rules for leave application:

1. CL cannot be applied for more than 3 continues days
2. CL cannot be combined with any other type of leave
3. SL cannot suffix PL
4. PL cannot prefix SL
5. ML cannot be prefixed with any other type of leave and can be continued by SL / PL
6. FF can be combined with any leave either prefix or suffix but cannot be sandwiched between any leave (Weekends / Holidays)
7. FF cannot be applied in break-ups
8. Once the leave is approved it cannot be cancelled unless cancellation of leave is submitted and is sanctioned.
9. Pending leave (Leave before approval) can be cancelled.
10. When leave type is FF – Comp off dates should be selected by clicking on the link provided and using form displayed .(Diagram 3)
11. Leave cannot be applied for the future dates (Dates in the next year)
12. Leave cannot be applied for the dates where attendance is already marked.
13. Leave cannot be applied for Week offs and holidays.

ARMS - Leave Application [Back](#) [Home](#)

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Note: All dates are in mm/dd/yyyy format
 Status 'S*' indicates the application for cancellation of sanctioned leave is pending.
 Compensatory Off (Comp Off) is applicable to employees upto the grade of Senior Consultants in : Software, Hardware & Support functions.
 Designation above Manager in software or its equivalent is not eligible for Compensatory Off.

[Help](#)
[Legends](#)
[Compoff Details](#)
[Current Year Absenteeism](#)

Compensatory Off Leave Balance			
Leave Code	Accumulated	Availed	Current Balance
FF	1	0	1

Leave Balance for 2005					
Leave Code	Opening Balance	Leaves Used	Current Balance	No. Of Times Used	Advance Used
-	-	-	-	-	-

Leave Balance for 2006					
Leave Code	Opening Balance	Leaves Used	Current Balance	No. Of Times Used	Advance Used
CL	4.5	0	4.5	0	0
SL	7.5	0	7.5	0	0

Leave Balance Adjustment				
Date	Leave	No.Of Days Adjusted	Added/Deducted	Reason

From Date:
 Is HalfDay In Start date: ☐
 session: ☐ 1st ☐ 2nd
 To Date:
 Is HalfDay In End date: ☐
 session: ☐ 1st ☐ 2nd
 Type Of Request:
 Reason For Leave:
 Submit

Figure 1

Leave Application - Microsoft Internet Explorer

Address: https://intranet.patni.com/sso/INARMS/application1.ASP

Note: All dates are in mm/dd/yyyy format
Status 'S*' indicates the application for cancellation of sanctioned leave is pending.
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[Compoft Details](#)
[Current Year Absenteeism](#)

From Date: 06/07/2006
Is HalfDay In Start date: ☐
session: ☒ 1st ☐ 2nd
To Date: 06/07/2006
Is HalfDay In End date: ☐
session: ☒ 1st ☐ 2nd
Type Of Request: CL-CASUAL LEAVE
Reason For Leave:
Submit

Calendar - Microsoft Internet Explorer

May 2006

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Off Leave Balance

Availed	Current Balance
0	1

Comp Off Details for 2005

Current Balance	No. Of Times Used	Advance Used
-	-	-

Comp Off Details for 2006

Current Balance	No. Of Times Used	Advance Used
4.5	0	0
7.5	0	0

Comp Off Adjustment

Added/Deducted	Reason
-	-

Leave History (Last Five)

Leave Code	Apply Dt	From Dt	To Dt	Actual No. Of Leave Days	Status	Reason For Leave	Reason For Rejection
-	-	-	-	-	-	-	-

Figure 2

Leave Application - Microsoft Internet Explorer

Address: https://intranet.patni.com/sso/INARMS/application1.ASP

Note: All dates are in mm/dd/yyyy format
Status 'S*' indicates the application for cancellation of sanctioned leave is pending.
Compensatory Off (Comp Off) is applicable to employees upto the grade of Senior Consultants in : Software, Hardware & Support functions.
Designation above Manager in software or its equivalent is not eligible for Compensatory Off.

[Compoft Details](#)
[Current Year Absenteeism](#)

From Date: 06/07/2006
Is HalfDay In Start date: ☐
session: ☒ 1st ☐ 2nd
To Date: 06/07/2006
Is HalfDay In End date: ☐
session: ☒ 1st ☐ 2nd
Type Of Request: FF-COMP OFF
[Select Comp Off dates](#)
Reason For Leave:
Submit

Comp Off Details - Microsoft Internet Explorer

ARMS - Comp Off List

Note: Comp Offs are valid for 90 days only from the date of accumulation.
Comp Offs available will lapse after valid upto date.
Leave date selected should be between Comp Off available date and Valid Upto date.

Select	Date	Day	Status	Valid upto (mm/dd/yyyy)
<input type="checkbox"/>	04/08/2006	Saturday	Available	07/07/2006

Clear All Submit Cancel

Figure 3

Lab 2. Creating Use Cases

Goals	<ul style="list-style-type: none">• Understand the application and develop creative Use cases.• To perform this lab you need to refer to the 'Lab 2. Order Processing & Billing software' case study discussed in the RVFD lab book.
Time	90 minutes

2.1: Supporting document for Order Processing & Billing Software

To perform this lab you need to refer to the 'Lab 2. Order Processing & Billing software' case study discussed in the RVFD lab book.

Please note that all fields are Mandatory fields.

Write effective Use Cases for the following requirements discussed in Lab 2 – sec 2.4 of RVFD Lab book :

1. Issue KOT
2. Issue bill

Pre Conditions:

1. User is administrative staff of company having access to Intranet
2. User has login with valid credentials.

Lab 3. Test Cases for Use case

Goals	<ul style="list-style-type: none">• Learn to write test cases for given Use cases description• Read the given below specification for 'Transfer Funds' and then write test cases for the same.
Time	60 minutes

Case Study : Transfer Funds Use Case Specification

Brief Description:

This use case allows account holder to transfer funds between two different accounts of a bank. This also includes the transfer between Current and Savings account of this bank.

Actor(s)

Actor	Description
Account Holder	Any user who has at least one account with the bank
Cur_ICENTURIAN	The external bank system that stores the current accounts
Sav_ICENTURIAN	The external bank system that stores the savings accounts

Preconditions

The user has successfully logged on to the banking system.

Flow of Events

Basic Flow

1. User initiates Transfer Funds use case
2. System retrieves the source accounts (i.e. the set of accounts owned by the account holder) and the destination accounts (i.e. accounts in this bank which have been activated to receive funds. By default all accounts owned by the account holder are activated to receive funds) from the external Bank Systems (Sav_ICENTURIAN and Cur_ICENTURIAN)
3. System requests user to provide information like First Delivery Date, Frequency (Weekly, Every 2 Weeks, Monthly, Quarterly, half Yearly, Yearly), Number of Times and Transfer Amount
4. User provides necessary details to transfer funds
5. System validates the information entered by user (for validation criteria refer Business Rules Section)
6. On successful validation, System calculates the applicable transaction fee (if any)
7. System performs Insufficient Balance Check (refer Business Rule section) if the selected source account is current account
8. System displays the transfer details along with transaction fee details for user's verification.

9. User provides the verification and confirms the transfer
10. System completes the transfer and accordingly credits the destination account and debits the source account

Alternative Flows

Minimum Balance Check

This flow is executed at step 7 of the basic flow when the selected source account is savings account.

1. System performs Minimum Balance Check (refer Business Rule section).
2. On Minimum Balance Check failure, System displays appropriate message and ends the Use Case.
3. On successful Minimum Balance Check, System continues from the basic flow at step 8.

Exceptional Flows

Invalid Input

This flow is executed when there is a validation failure at step 5 of basic flow.

1. System displays the appropriate error message and asks user to enter the correct information.
2. System continues the use case from the basic flow at step 3.

Insufficient Balance

This flow is executed at step 7 of the basic flow when Insufficient Balance Check business rule is violated.

1. System displays the appropriate error message and ends the Use Case.

Post Conditions

Transfer Amount is successfully credited to destination account and debited from source account

Business Rules

1. First Delivery Date, Transfer Amount are mandatory
2. First Delivery Date > Today's Date
3. Following rules are applicable to Number of Times
 - a. It will be applicable only if Frequency is selected
 - b. It should be a positive integer
4. Transfer Amount should be a positive number
5. Insufficient Balance Check for Current Account
$$AB - (TA + TF) < 0$$
6. Minimum Balance Check for Savings Account
$$AB - (TA + TF) \geq 1000$$

Where, AB = Account Balance

TA = Transfer Amount

TF = Transaction Fee