



Queensland University  
of Technology

# Oracle Business Process Management

Tutorial Lab Project (INN696-1, Semester 1/2014)

Loan Assessment Process

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## Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>5</b>
<b>2</b>	<b>BACKGROUND OF ORACLE BPM .....</b>	<b>7</b>
<b>3</b>	<b>INSTALLATION OF ORACLE BPM .....</b>	<b>17</b>
<b>4</b>	<b>NAVIGATE JDEVELOPER ENVIRONMENT.....</b>	<b>21</b>
<b>5</b>	<b>CREATE A NEW BPM APPLICATION PROJECT .....</b>	<b>28</b>
<b>6</b>	<b>MODEL THE PROCESS .....</b>	<b>31</b>
6.1	ADD PROCESS LANES.....	32
6.2	ADD MAIN ACTIVITIES AND SEQUENCE FLOWS .....	35
6.3	ADD ANCILLARY ACTIVITIES .....	39
<b>7</b>	<b>IMPLEMENT THE PROCESS .....</b>	<b>41</b>
7.1	INITIAL SET-UP.....	41
7.1.1	<i>Server Connection.....</i>	<i>41</i>
7.1.2	<i>Email Notification.....</i>	<i>42</i>
7.2	IMPLEMENT ORGANIZATION .....	49
7.3	IMPLEMENT DATA OBJECTS.....	51
7.4	IMPLEMENT HUMAN TASKS.....	60
7.4.1	<i>Enter Application Form.....</i>	<i>61</i>
7.4.2	<i>Assess Credit History.....</i>	<i>86</i>
7.4.3	<i>Appraise Property.....</i>	<i>89</i>
7.4.4	<i>Assess Eligibility.....</i>	<i>91</i>
7.4.5	<i>Prepare and Send Acceptance Pack .....</i>	<i>92</i>
7.4.6	<i>Prepare and Send Home Insurance Quote.....</i>	<i>96</i>
7.4.7	<i>Verify Repayment Agreement.....</i>	<i>98</i>
7.4.8	<i>Take Final Decision.....</i>	<i>100</i>
7.5	IMPLEMENT SCRIPT TASKS.....	102
7.5.1	<i>Initialize Data.....</i>	<i>102</i>
7.5.2	<i>Update Rejected/Eligible status .....</i>	<i>104</i>
7.5.3	<i>Update Approval/Rejected loan status.....</i>	<i>106</i>
7.6	IMPLEMENT SERVICE TASKS.....	107
7.7	IMPLEMENT BUSINESS RULES .....	114
7.8	IMPLEMENT TIMER .....	118
7.9	IMPLEMENT GATEWAYS.....	119
7.10	IMPLEMENT EMAILS .....	121
7.10.1	<i>Reject Email – Illegibility .....</i>	<i>121</i>
7.10.2	<i>Cancel Application Email .....</i>	<i>123</i>
7.10.3	<i>Approval Email .....</i>	<i>124</i>
7.10.4	<i>Rejection Email .....</i>	<i>124</i>
<b>8</b>	<b>DEPLOY THE PROCESS.....</b>	<b>124</b>
<b>9</b>	<b>RUN THE PROCESS.....</b>	<b>130</b>
9.1	PROCESS USER .....	130
9.2	ADMINISTRATOR.....	141
<b>10</b>	<b>REFERENCES.....</b>	<b>143</b>
<b>11</b>	<b>APPENDIX.....</b>	<b>144</b>
11.1	FURTHER IMPROVEMENTS.....	144
11.2	INITIALIZATION DATA .....	145
11.3	GENERATE PDF CODE .....	146
11.3.1	<i>DownloadFileBean.java .....</i>	<i>146</i>

11.3.2	<i>PDFGeneratorBean.java</i> .....	150
11.4	COMPLETENESS CHECKING CODE.....	152
11.5	COMMON ERRORS.....	153

## ABBREVIATIONS

ADF	Application Development Framework
BAM	Business Activity Monitoring
BPM	Business Process Management
BPMN	Business Process Model and Notation
EJB	Enterprise Java Beans
JDK	Java Development Kit
JEE	Java Enterprise Edition
JSF	Java Server Faces
MDS	Metadata Services
OSB	Oracle Service Bus
SCA	Service Component Architecture
SOA	Service Oriented Architecture
UMS	User Messaging Service

# 1 Introduction

This project is to deploy Oracle BPM environment on a lab environment and demonstrate business process implementation for a Loan Application Assessment process. This process is based on *Fundamentals of Business Process Management* book by Dumas, M., La Rosa, M., Mendling, J., Reijers, H.A. The output is also a complete tutorial of the implementation details which can be used by future students who are interested in this technology.

Below is a summary of the business process.

The process is initiated when a loan applicant submits an application form. A loan officer will receive the application form and check for its completeness, either manually or automatically with a system automatic check. If the application is not complete, it is sent back to the applicant for supplement. In case the application is not completed by the applicant within 5 days, the system will terminate the process. Once it is complete, it will be forwarded to a financial officer and a property appraiser for assessment. The financial officer checks credit history of the applicant while the property appraiser evaluates the value of the property. The financial officer gives the application a credit grade (A, AA, B, BB, etc.) which will be translated into a rating mark by the system. Once both financial and property assessment are done, the application is transferred to a loan officer who will assess its overall eligibility. If it is not eligible, the process sends email notification to the applicant and stops there. If it is marked as eligible, the loan officer will then prepare an application pack which includes a repayment agreement with detailed terms/conditions and send to the applicant. In the next step, if the application includes a request for home insurance, it will be forwarded to an insurance sales representative (ISR) who will provide a quote for the home insurance. Once the loan officer receives the repayment agreement returned from the applicant (via email, hard-copy) and the home insurance quote from the ISR (if applicable), the loan officer will verify the repayment agreement and forward all information to another loan officer for the final decision. In case the repayment agreement verification is pending for more than 14 days, the system will terminate the process. In the final step, the loan officer makes a decision to approve or reject the application. In either cases, an email notification will be sent to the applicant for their information and the process stops.

In this tutorial, we will implement the above process with Oracle SOA/BPM using key components such as Oracle BPMN, BPEL, Business Rules, Human Workflow, and Oracle ADF. System installation for Oracle SOA/BPM server and Oracle JDeveloper must be in place (installation is guided in this paper).

It is easier for readers who want to exercise this tutorial if they are equipped with basic knowledge and skills of BPMN, BPEL, Java programming, XML, SOA, Web services and Java servlet/JSF technologies.

The tutorial is structured into the following sections.

Background of Oracle BPM	Introduces underlying Oracle BPM concepts and technologies used in this tutorial
Install Oracle SOA/BPM	Outlines main installation steps along with shared experience to ensure a smooth system set up. Readers should still refer to Oracle installation document for technical instructions
Navigate Oracle JDeveloper environment	Explains essential design/development editors used in Oracle JDeveloper environment facilitate readers with this complex environment
Create a new BPM application project	Step by step guide on how to open a BPM application project from scratch

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