**ISCG1742: Information Systems and Analysis**

**Assignment 3**

**Analysis Models**

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**Information systems analysis**

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# Part 1 Introduction

Unitec Electronics is a business that sells electronics to the public and have both a shop and website. The feedback from customers highlights that some customers are not happy to use the internet all the time, and have said that they would prefer to look through the products at their convenience.

In this section there is five agile user stories for the five use cases. This is followed by a use case diagram for the system, and then five use case descriptions.

## Agile User Stores

Use case 1  
As a catalogue administrator, I want to create a catalogue so that a it can be sent to customers.

Use case 2  
As a Customer, I want to order a catalogue so that I can see what there is to order.

Use case 3  
As a customer, I want to open a subscription so that I get a new catalogue every month.

Use case 4  
As a subscriber, I want to change my subscription details so that I keep getting my subscription.

Use case 5  
As the system, I want to get subscribers email addresses so that it can send a catalogue each month

## Use case diagram for Unitec Electronics Ltd



## Use Case Descriptions

Here are the five use case descriptions for Unitec Electronics Ltd.

1. **Create catalogue**

|  |  |  |
| --- | --- | --- |
| **USE CASE NAME:** | Create a catalogue | **USE CASE TYPE** |
| **USE CASE ID:** | 1 | **Business Requirements: 🗹** |
| **PRIORITY:** | High |  |
| **PRIMARY BUSINESS ACTOR:** | Catalogue Administrator | |
| **OTHER PARTICIPATING ACTORS:** | None | |
| **DESCRIPTION:** | This use case describes a catalogue administrator creating a catalogue | |
| **PRE-CONDITIONS:** | The catalogue administrator has logged onto the system | |
| **TYPICAL COURSE** | 1. The catalogue administrator selects “create catalogue” function. 2. The system displays the “create catalogue” form. 3. The system displays product details (product name, description, picture and price). 4. The catalogue administrator selects a product for the catalogue. 5. The system adds the selected product to the catalogue. 6. The catalogue administrator selects products into categories. 7. The catalogue administrator creates an index. 8. The catalogue administrator creates a table of contents. 9. The system saves the product details. 10. The catalogue administrator selects to end. | |
| **OF EVENTS:** |
|  |
|  |
|  |
|  |
| **ALTERNATE COURSES:** | None | |
|  | |
| **POST CONDITIONS:** | None | |
| **ASSUMPTIONS:** | None | |

1. **Order a catalogue**

|  |  |  |
| --- | --- | --- |
| **USE CASE NAME:** | Order a catalogue | **USE CASE TYPE** |
| **USE CASE ID:** | 2 | **Business Requirements: 🗹** |
| **PRIORITY:** | High |  |
| **PRIMARY BUSINESS ACTOR:** | Customer | |
| **OTHER PARTICIPATING ACTORS:** | None | |
| **DESCRIPTION:** | This use case describes a customer ordering a catalogue. | |
| **PRE-CONDITIONS:** | The customer has logged onto the system | |
| **TYPICAL COURSE** | 1. The customer selects “order a catalogue” function. 2. The system displays “order a catalogue” form. 3. The customer enters their email address. 4. The customer submits their information. 5. The system retrieves the current catalogue. 6. The system creates an email. 7. The system inserts the email address and subject line. 8. The system attaches the catalogue. 9. The system sends the email to the customer. 10. The customer elects to end the use case. | |
| **OF EVENTS:** |
|  |
|  |
|  |
|  |
| **ALTERNATE COURSES:** | None | |
| None | |
| **POST CONDITIONS:** | None | |
| **ASSUMPTIONS:** | None | |

**3. Open a subscription**

|  |  |  |
| --- | --- | --- |
| **USE CASE NAME:** | Open a subscription | **USE CASE TYPE** |
| **USE CASE ID:** | 3 | **Business Requirements: 🗹** |
| **PRIORITY:** | Medium |  |
| **PRIMARY BUSINESS ACTOR:** | Customer | |
| **OTHER PARTICIPATING ACTORS:** | None | |
| **DESCRIPTION:** | This use case describes a customer who wants to subscribe to a catalogue. | |
| **PRE-CONDITIONS:** | The customer has logged onto the system | |
| **TYPICAL COURSE** | 1. The customer selects “subscribe to our catalogue” function. 2. The system displays the “subscribe to our catalogue” form. 3. The customer enters their email address. 4. The customer submits their information. 5. The system creates a subscription. 6. The system saves the information. 7. The system displays a message. 8. The system sends the customer a welcome email. 9. The system closes the form. | |
| **OF EVENTS:** |
|  |
|  |
|  |
|  |
| **ALTERNATE COURSES:** | Step 3a.1: The customer elects to enter their name and physical address.  Step 3b.2: The system returns to step 4. | |
|  | |
| **POST CONDITIONS:** | None | |
| **ASSUMPTIONS:** | None | |

**4. Change a subscription**

|  |  |  |
| --- | --- | --- |
| **USE CASE NAME:** | Change a subscription | **USE CASE TYPE** |
| **USE CASE ID:** | 4 | **Business Requirements: 🗹** |
| **PRIORITY:** | Medium |  |
| **PRIMARY BUSINESS ACTOR:** | A subscriber | |
| **OTHER PARTICIPATING ACTORS:** | None | |
| **DESCRIPTION:** | This use case describes a subscriber who wants to change subscription details. | |
| **PRE-CONDITIONS:** | The subscriber has logged onto the system. | |
| **TYPICAL COURSE** | 1. The subscriber selects “change subscription details” function. 2. The system displays the “Change a subscription” form. 3. The subscriber enters their email address. 4. The system displays all the information. 5. The subscriber changes the information they need to. 6. The system displays an ‘change subscription details’ prompt. 7. The subscriber confirms the changes. 8. The system updates the subscription record. | |
| **OF EVENTS:** |
|  |
|  |
|  |
|  |
| **ALTERNATE COURSES:** | None | |
| None | |
| **POST CONDITIONS:** | None | |
| **ASSUMPTIONS:** | None | |

**5. Send a catalogue to subscribers.**

|  |  |  |
| --- | --- | --- |
| **USE CASE NAME:** | Send a catalogue to subscribers | **USE CASE TYPE** |
| **USE CASE ID:** | 5 | **Business Requirements: 🗹** |
| **PRIORITY:** | High |  |
| **PRIMARY BUSINESS ACTOR:** | System | |
| **OTHER PARTICIPATING ACTORS:** | Time | |
| **DESCRIPTION:** | This use case describes the system sending a catalogue to subscribers. | |
| **PRE-CONDITIONS:** | On the third of each month the system initiates this process. | |
| **TYPICAL COURSE** | 1. The system extracts the email address of each subscriber. 2. The system creates an email for each subscriber. 3. The system fills in the necessary details of the email. 4. The system attaches the months catalogue. 5. The system sends an email to the subscriber. 6. The system ends the case. | |
| **OF EVENTS:** |
|  |
|  |
|  |
|  |
| **ALTERNATE COURSES:** | None | |
| None | |
| **POST CONDITIONS:** | None | |
| **ASSUMPTIONS:** | None | |

# Part 2 Introduction

Package A:

Balham college is an educational provider that enrols students for various programmes. They employ a number of staff, which includes both course and programme administrators. Other staff include a college research manager, and clerks for human resources, enrolments and an IT.

For this part of the report there is five use case descriptors, which have an activity diagram, sequence diagram and a class diagram for each of them. The use cases involve the student, and consist of add student, update student, delete student, also produce a student report and enrol student. The end of the report is a final diagram of a combined entity relationship diagram.

## Use Case 1 Add Student Activity Diagram



## Use Case 1 Add Student Sequence Diagram

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## Use Case 1 Add Student Class Diagram



## Use Case 2 Update Student Activity Diagram



Use Case 2 Update Student Sequence Diagram



## Use Case 2 Update Student Class Diagram



## Use Case 3 Delete Student Activity Diagram



## Use Case 3 Delete Student Sequence Diagram



## Use Case 3 Delete Student Class Diagram



## Use Case 4 Produce Students Report Activity Diagram



## Use Case 4 Produce Students Report Sequence Diagram



## Use Case 4 Produce Students Report Class Diagram



## Use Case 5 Enrol Student Activity Diagram



## Use Case 5 Enrol Student Sequence Diagram



## Use Case 5 Enrol Student Class Diagram



## Entity Relationship Diagram for Package A



End of report

# References

Neustadt, I., & Arlow, J. (2005). *UML 2 and the Unified Process: Practical Object-Oriented Analysis and Design (2nd Edition).* Upper Saddle River: Pearson Education, Inc.