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| Use Case Model Survey |
| Cylinders & Orders Management System (COMS) Project |
| This document establishes the high-level design of the system. It defines the proposed software architecture, the transition from analysis to design, and the database design for the development of the COMS project. |

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Use-Case-Model Survey

# Introduction

The Golden Gravure (Hoang Kim) Company manufactures various types of cylinders for the printing industry. Hoang Kim requires a computerised control system to manage the production process, employees and sales order. For this part of the project, the system is to be designed and implemented as a tiered computing system with multiple client workstation throughout the factory. The main requirements for the system are defined in "User Requirements Specification for the Cylinder and Order Management System (COMS)", reference GG/COMS/TS.1/v1. The system is to be developed using object-oriented techniques and the .NET programming language.

The highest level of object oriented analysis involves describing the requirements in terms of Use Case. The aim of the Use Case Model is to provide an overview of these use cases and their users (known as Actors).

# Actors

## Accountant

Documentation: This actor represents the accountant in the company. He can manage the performance formula which are used to calculate worker's mark when he worked on a cylinder. He can print worker' mark report and step list.

## Admin

Documentation: This actor represents the IT admin in the company. He can manage employee's accounts, roles and access rights.

## Department Manager

Documentation: This actor represents the department manager in the company. He can manage the work flow and steps under a work flow. He can also assign roles and access rights to an employee, subject to director's approval.

## Director

Documentation: This actor represents the director in the company. He could control an employee's access to certain roles and access rights.

## Employee

Documentation: This actor represents the employee in the company. The employee needs to login to be able to use the system. He can view the progress log of a cylinder, as well as the current status of the cylinders in a sales order.

The role of each employee will be assigned by department managers to allow him access to appropriate functions.

## Operation Manager

Documentation: This actor represents the operation manager in the company. He can control a sales order's production process. Namely, he can signal when to start working on the cylinders for a particular sales order, and he can view the current cylinders in a queue for a work flow. He can also manage the possible errors occured during the production process, and send a faulty cylinder to the correct step to be re-done.

## Sales Staff

Documentation: This actor represents the sales staff in the company. He can create and update sales order, including the cylinders under each sales order.

## Worker

Documentation: This actor represents the worker in the company. He can add the steps performed on a cylinder into the system.

# Use Cases

## Approve Role Change

Documentation: This use case enables the director to approve or reject an employee access right, to allow or block him from accessing a particular function.

## Change Cylinder Priority

Documentation: This use case enables the operation manager to change the cylinder priority, to allow it to be processed earlier in the work flow queue.

## Export Queue To Excel

Documentation: This use case enables the operation manager to export the queue out to Excel format.

## Log In

Documentation: This use case enables the employee to login to the system. Once logged in, he can access the functions allocated to him through his roles and access rights.

## Log Out

Documentation: This use case enables the employee to log out of the system.

## Manage Access Rights

Documentation: This use case enables the admin to create, update or delete access rights information.

## Manage Employee-Roles Relationship

Documentation: This use case enables the department manager to link employees with their roles and access rights.

## Manage Error

Documentation: This use case enables the operation manager to create, update or delete the possible errors during cylinder production process.

## Manage Performance Formula

Documentation: This use case enables the accountant to create, update or delete the performance formula to calculate worker's mark for a particular step. The formula will be used by the system once the worker has updated the cylinder status.

## Manage Role

Documentation: This use case enables the admin to create, update or delete role information.

## Manage Role-Rights Relationship

Documentation: This use case enables the admin to link access rights to roles. One access rights can be under many roles. One role can have many access rights.

## Manage Sales Order

Documentation: This use case enables the sales staff to create, update or delete sales orders. He can also add cylinders to sales order here.

## Manage User Account

Documentation: This use case enables the admin to create, update or delete employee accounts information.

## Manage Workflow

Documentation: This use case enables the department manager to create, update or delete workflows.

## Manage Workflow-Step Relationship

Documentation: This use case enables the department manager to link steps to the correct work flow.

## Print Cylinder Info

Documentation: This use case enables the operation manager to print the cylinder information with cylinder barcode.

## Print Step List

Documentation: This use case enables the accountant to print the list of steps under a work flow.

## Print Worker's Marks Report

Documentation: This use case enables the accountant to print the mark a worker has obtained during a period.

## Send Cylinder To Step

Documentation: This use case enables the operation manager to send a faulty cylinder to another step to be re-done. He will also select the error detected for logging purpose.

## Start Cylinder Production Process

Documentation: This use case enables the operation manager to allow a sales order to start the production process. All cylinders under the sales order will become available for processing.

## Stop Cylinder Production Process

Documentation: This use case enables the operation manager to stop the cylinder production process.

## Update Cylinder Status

Documentation: This use case enables the worker to update cylinder status when:

- They start working on the cylinder.

- They finished working on the cylinder.

## View Cylinder Info

Documentation: This use case enables the operation manager to view the cylinder information with cylinder barcode.

## View Cylinder Progress Log

Documentation: This use case enables the employee to view the list of steps performed on the cylinder from the beginning.

## View Employee's Detail

Documentation: This use case enables the user to view employee's information.

## View Error

Documentation: This use case enables the operation manager to view the error information.

## View Order Progress Log

Documentation: This use case enables the employee to view the status of the cylinders under a sales order. From the status the employee will know which step the cylinder is currently at, under which work flow from which department.

## View Performance Formula

Documentation: This use case enables the accountant to view the performance formula information.

## View Queue For Workflow

Documentation: This use case enables the operation manager to view the queue in the current work flow. The queue consists of all the cylinder in various steps belonging to this work flow.

## View Sales Order

Documentation: This use case enables the sales staff to view sales order information.

## View Step List

Documentation: This use case enables the accountant to view the list of steps for a work flow.

## View Workflow

Documentation: This use case enables the department manager to view the work flow information.

# Views

