## 

## Software Architecture Design Document.

Version 0.5

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**Revision History**

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| --- | --- | --- | --- |
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|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Contents

[**Software Architecture Design Document. 1**](#_Toc328030624)

[I. Introduction. 4](#_Toc328030625)

[**1.1.** **Purpose.** 4](#_Toc328030626)

[**1.2.** **Reader.** 4](#_Toc328030627)

[**1.3.** **Document overview.** 4](#_Toc328030628)

[II. Project overview. 4](#_Toc328030629)

[**2.1.** **Project description.** 4](#_Toc328030630)

[- Purpose. 4](#_Toc328030631)

[- Duration. 4](#_Toc328030632)

[- Output. 4](#_Toc328030633)

[**2.2.** **Project team.** 4](#_Toc328030634)

[**2.3.** **Stakeholders.** 4](#_Toc328030635)

[**2.4.** **Scope and vision.** 4](#_Toc328030636)

[III. Architecture the driver. 4](#_Toc328030637)

[**3.1.** **Key requirement.** 4](#_Toc328030638)

[**3.2.** **Business constraints.** 4](#_Toc328030639)

[**3.3.** **Technical constraints.** 4](#_Toc328030640)

[**3.4.** **Quality attributes.** 4](#_Toc328030641)

[IV. System architecture specification. 5](#_Toc328030642)

[4.1. System Context 5](#_Toc328030643)

[**4.2.** **System users.** 5](#_Toc328030644)

[4.3. Overview. 5](#_Toc328030645)

[V. Detail architect design. 5](#_Toc328030646)

[**5.1.** **Allocation view.** 5](#_Toc328030647)

[**5.1.1.** **Primary presentation.** 5](#_Toc328030648)

[**5.1.2.** **Element catalogue.** 5](#_Toc328030649)

[**5.2.** **Components and connections view.** 5](#_Toc328030650)

[**5.2.1.** **Primary presentation.** 5](#_Toc328030651)

[**5.2.2.** **Element catalogue.** 5](#_Toc328030652)

[**5.3.** **Module view.** 5](#_Toc328030653)

[**5.3.1.** **Primary presentation.** 5](#_Toc328030654)

[**5.3.2.** **Element catalogue.** 5](#_Toc328030655)

[**5.4.** **Mapping.** 5](#_Toc328030656)

1. **Introduction.**
   1. **Purpose.**

Document describes architecture of system for Smart Mart, use for developing and design detail of software.

* 1. **Reader.**

|  |  |  |
| --- | --- | --- |
| No | Intended Audience | Reading Suggestions |
| 1 | Architecture & Design Team | Deployment View, C&C View, Module View |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| No | Glossary | Description |
| 1 | QA | Quality Attribute |
| 2 | OSP | Online Store Project |
| 3 | C&C | Component and Connector |

* 1. **Document overview.**

Document include 3 part, provide to reader a big picture of system architect.

* Project overview.
* Architecture the driver and architecture background.
* Architecture specification.

1. **Project overview.**
   1. **Project description.**

* **Purpose:** Develop a program can help customer manage their sale operation in store system, manage inventory, manage store’s customer and manage store’s user by using support from the computers.
* **Duration.** A month from 21st May to 25th June.
* **Output.**
  1. **Project team.**
  2. **Stakeholders.**
  3. **Scope and vision.**

Program will help customer of store system to manage their sale operation, manage store’s customer, user and inventory

1. **Architecture the driver.**
   1. **Key requirement.**
   2. **Business constraints.**

|  |  |  |  |
| --- | --- | --- | --- |
| NO | Content | Constraint | Priority |
| 1 | Schedule | Develop in about 1 month. | High |
| 2 | Team members | 5 members. | High |

* 1. **Technical constraints.**

|  |  |  |  |
| --- | --- | --- | --- |
| NO | Content | Constraint | Priority |
| 1 | Platform | .NET Framework | High |
| 2 | Develop method | MVC model version 3 | High |
| 3 | Language | C# | High |
| 4 | Tool | Visual Studio 2010 SP1 Ultimate | High |
| 5 | Runtime environment | Software must install in a computer and can run on any browsers. | High |

* 1. **Quality attributes.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Quality** | **Quality ID** | **Concern** | **Attribute** | **Priority** |
| Performance | QA.01 | Update customer’s score immediately | When the score are used, the number of score used is immediately subtracted from the number of score accrued by the member. | High |
| The synchronization between the branches and center. | Moreover, in addition to the sales operation, the system is also capable of performing the statistical analysis on the sales records of all stores in near real-time manner. | High |
| Availability | QA.02 | No down time | No down time when connection with head server have been cut. | High |
| No down time | No down time when connection of POS terminal with store server have been cut or one database has been broken. Switch to use second database to ensure transactions will be continued. | High |

1. **System architecture specification.**

## System Context

Based on Team assignment document - provided information about POS-System, the implemented Smart Mart POS system will provide a numbers of function that help head manager control, monitor and report status of store system efficiently.

The following table will describes roles and responsibility of system.

* 1. **System users.**

|  |  |
| --- | --- |
| **Role** | **Responsibility** |
| Manager | Manager is the person or a group have responsibility to control store system. |
| Store manager | Store manager is the person has responsibility to control local store operation. |
| Cashier | Cashier is group of account have responsibility to operate sale activities |

## Overview.



1. **Detail architect design.**
   1. **Allocation view.**
      1. **Primary presentation.**



* + 1. **Element catalogue.**
  1. **Components and connections view.**
     1. **Primary presentation.**
     2. **Element catalogue.**
  2. **Decomposition view.**
     1. **Primary presentation.**



* + 1. **Element catalogue.**
  1. **Layers view.**
     1. **Primary presentation.**



* + 1. **Element catalogue.**
  1. **Combine view (Decomposition and Layers view).**
     1. **Primary presentation.**
     2. **Element catalogue.**
  2. **Mapping.**