**MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

Football Pitches Booking

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| **Capstone Project code** | FPB |

- Ho Chi Minh, 01/2014 –

Table of Contents

[Report No.1: Introduction 3](#_Toc377205170)

[1.1. Initial idea of group: 3](#_Toc377205171)

[1.2. Overview of existing system: 3](#_Toc377205172)

[1.3. Benefit of expected system: 3](#_Toc377205173)

[Report No.2: Project Management Plan (PMP) 4](#_Toc377205174)

[2.1. Problem Definition 4](#_Toc377205175)

[2.1.1. Name of this CapStone Project. 4](#_Toc377205176)

[2.1.2. Problem Abstract 4](#_Toc377205177)

[2.1.3. Project Overview 4](#_Toc377205178)

[2.2. Project organization 5](#_Toc377205179)

[2.2.1. System Process Model 5](#_Toc377205180)

[2.2.2. Roles and Responsibilities 5](#_Toc377205181)

[2.2.3. Tools and Techniques 6](#_Toc377205182)

[2.3. Project management plan 6](#_Toc377205183)

[2.3.1. Tasks: 6](#_Toc377205184)

[2.3.2. Task Sheet: Assignments and Timetable 8](#_Toc377205185)

## Introduction

### Initial idea of group:

Football Pitches Booking is a B2B2C (Business to Business to Customer) website that allows customers to book field online. Beside that it helps the stadium owners with advertising football stadiums and managing reservation. In addition, the website enables its admin to manage information of those customers and stadium owners.

In this situation, the organization is first business provide services

### Overview of existing system:

For customers: Existing system just provides customers with address and contact information of stadium owners, then customers have to contact with the stadium owner to book space. They have to call each stadium owner individually to check whether the field is available or not. Moreover, the current system does not have either functions to make statistics of customers' habits or some smart functions like offering options/suggestion to customers, which is time-consuming and inconvenient to customers.

For the stadium owners, sometimes they make mistakes in management such as duplicate reservation, which leads to bad result: they could lose their customers as well as profit. Beside the management is executed manually, they do not have tools to optimize the timing to utilize the fields, this has bad impact on profit. Sometimes customers cancel their reservation, the stadium owners will suffer the loss. Apart from cancellation, the website does not have functions to create events to appeal customers to take part in.

For the Web masters, the shortage of functions of the website is the obstacle to persuade stadium owners to pay for the services.

### Benefit of expected system:

Football Pitches Booking makes the reservation easier and save time for customers. Once they have booked, they don’t have to worry there will be a duplicate reservation caused by stadium owners' mistake. The website's smart functions help users to find the appropriate field by searching stadium around customers' position, comparing price among stadiums. The benefits to customers are saving time, getting more information and enjoying discount or voucher from the stadium owners.

This system helps stadium owner to manage their field easily, reduce the implement process of business operations, save time and costs. The automatic system helps to prevent the risk of duplicate booking and to minimize the loss caused by reservation cancellation. The self-arrangement and self-timing offered to customers makes the utilization of field possible, reduce the dead time and increase profit for the stadium owners. Furthermore, stadium owners can use the website as a channel to advertise their services as well as communicate with their customers; hence, they can win more customers and gain more prestige through rating-feedback functions. Analyzing and evaluating the feedback to make the business plan more reasonable.

For the webmaster, with many smart and outstanding functions of the new system, they have more chances to increase the profit by attracting stadium owners to use this service.

## Project Management Plan (PMP)

### Problem Definition

#### Name of this CapStone Project.

This Capstone Project Name is “Football Pitches Booking” or “FPB” in short.

#### Problem Abstract

Football Pitches Booking is a website that allow customers to place booking online. At the same time, it helps the stadium owners with advertising football stadiums, hiring and managing reservation  
Requirements: There are two modules need to be implemented:  
Front end: This part is served for customer who wants to book a football place.  
Back end: This part is served for stadium owner who want to advertising football stadiums, hiring and managing reservation.

#### Project Overview

##### The Current System

For customer :  
 + Just apply for one stadium, no more than.   
 + No more customer know about  
 + start from requirement but no more satisfy from websites  
 + websites now are simple and spare, don’t have more function for customer such as : make statistics of customers' habits or some smart functions like offering options/suggestion to customers.   
 + just provides customers with address and contact information of stadium owners, then they must have to contact stadium owners to book space, must have to call each stadium owner individually to check whether the field is available or not .  
For stadium owners :   
 + it difficult for advertising to some people, very few people will know their stadium if they don’t make something to attract and broadcast  
 + easy make mistake in management is executed manually such as duplicate reservation, have dead time ( one field : no people place at 2pm but 2 people place at 4pm at the same time .. )  
 + don’t have tool to optimize the timing to utilize the fields  
 + risks and losses from customers when they cancel their reservation   
For Web master :  
 + no more customer, no money to pay to maintain system.

##### The Proposed System

The system is developed web-base. This will provide these features to support the customers, stadium owners and admin:  
For customer:   
 + reservation quickly, easily, saving time...   
 + Help customer to find the appropriate field by searching stadium round customers' position, comparing price among stadiums  
 + Make customer will be eased by professional payment methods , accurate and science  
 + Getting more information and enjoying discount or voucher from the stadium owners.  
For stadium owner:   
 + Once the customer have booked, they don’t have to worry there will be a duplicate reservation caused by stadium owners' mistake.  
 + easy way to use website like a channel to advertise, broadcast their services and attract many many people come to their stadium  
 + reduce the implement process of business operations, save time and costs  
 + The automatic system helps to prevent the risk of duplicate booking and to minimize the loss caused by reservation cancellation  
 + Analyze and evaluate the feedback will help they make a business plan more reasonable  
 + The self-arrangement and self-timing offered to customers makes the utilisation of field possible, reduce the dead time and increase profit  
 + gain more prestige through rating-feedback from customer as well as communicate with their customers  
 + website easy to use , intuitive , simple operation  
 For web master:  
 + with many smart and outstanding functions of the new system, have more chances to increase the profit by attracting stadium owners to use this service

##### Boundaries of the System :

+ Website don’t intervene about finance problem of stadium owner.  
 + Website is a auto-system, always have validate, so it rarely have fault, doesn’t mean that did not happen.  
 + Website focus about booking football place, so if there are any other problems occur, we don’t have any responsibility to resolve.  
 + Only main functions of the system will be developed.

##### Development Environment:

**Hardware requirements:**  
 **+** A computerwith hardware that capable of running Windows 7 operating system, 2GB of RAM for addition software  
**Sotfware requirements:**   
 + Operating System : Windows 7 Professional (32 or 64 bit).

### Project organization

#### System Process Model

The software will be developed by using waterfall model. The waterfall model developing process includes five main phases:



**Waterfall model**

* + - Requirement analysis and software definition: The first phase is also the most important phase of the process which may cause great effect to other phases. This phase includes gathering requirements from customer, or from other source like the Internet, and producing the most detail and accurate software definition.
    - System design: This phase is fundamental for implementation phase. Based on customer’s requirements to create logical modules, and definite their inter relations. Using algorithm and diagram to describe implementation of those modules.
    - System implementation and Unit testing: Developing software modules follow detail designs, and doing unit testing for each module.
    - Integration and System testing: Testing output, performance in modules integrating process, and retests all functions of whole system.
    - System deployment and maintenance: After testing completely, the software is handle over client, developing team will respond for maintenance of the system.

#### Roles and Responsibilities

|  |  |  |
| --- | --- | --- |
| Full Name | Role | Responsibilities |
| Lại Đức Hùng | Supervisor, Project Manager | * Tracking and managing process * Advising ideas and solutions * Specify requirement |
| Nguyễn Duy Phương | Team Leader, Business Analyst, Developer, Tester | * Tracking and managing process * Analyzing requirement * Writing documents and reports * Designing database * Creating and managing project’s structure * Creating and managing project configuration * Creating project’s plan * Designing GUI * Coding and testing |
| Nguyễn Hữu Hoàng Giang | Team Member, Business Analyst, Developer, Tester | * Analyzing requirement * Writing documents and reports * Designing database * Designing GUI * Coding and testing |
| Nguyễn Đức Thịnh | Team Member, Business Analyst, Developer, Tester | * Analyzing requirement * Writing documents and reports * Designing database * Designing GUI * Coding and testing |
| Nguyễn Quốc Khánh | Team Member, Business Analyst, Developer, Tester | * Analyzing requirement * Writing documents and reports * Designing database * Designing GUI * Coding and testing |

#### Tools and Techniques

##### Tools

* Visual Studio 2012
* Microsoft SQL Server 2008 R2
* Star UML 5.0
* Microsoft Office 2013
* Tortoise SVN
* Google Code
* Log4net

##### Techniques

* .NET Framework 4.0
* ASP.NET MVC 4
* UML Modeling 2.0
* HTML5, CSS3, jQuery
* LINQ

### Project management plan

#### Tasks:

##### Study requirement and review technology

|  |  |
| --- | --- |
| Description | Discussing with project manager to understand requirement, business process.  Self-review the technology will be used in project. |
| Deliverables | N/A |
| Resources Needed | 12 man-days |
| Dependencies and Constraints | N/A |
| Risks | Requirement too strange to develop.  The project is not feasible.  The chosen technology is not feasible. |

##### Project Introduction

|  |  |
| --- | --- |
| Description | From requirements and result of researching old system create project introduction document. |
| Deliverables | Project Introduction document. |
| Resources Needed | 4 man-days |
| Dependencies and Constraints | Depend on result of studying requirement. |
| Risks | Lack of experience in researching old system  Do not understand requirements clearly. |

##### Project Management Plan

|  |  |
| --- | --- |
| Description | Prepare project plan and task list. |
| Deliverables | Project Management Plan (PMP) document. |
| Resources Needed | 4 man-days |
| Dependencies and Constraints | Depend on result of studying requirement. |
| Risks | Lack of experience in scheduling may lead to fail in keeping deadline. |

##### System Requirement Specification

|  |  |
| --- | --- |
| Description | Specify system requirements |
| Deliverables | System Requirement Specification (SRS) document |
| Resources Needed | 28 man-days |
| Dependencies and Constraints | Depend on result of studying requirement.  Follow the SRS Template.  Keeping the deadline in plan. |
| Risks | Do not understand requirements clearly. |

##### System Design Description

|  |  |
| --- | --- |
| Description | Design system architecture, describe system component, user interface design, database in details level for developer. |
| Deliverables | System Design Description (SDD) document |
| Resources Needed | 38 man-days |
| Dependencies and Constraints | Clear requirements of system.  Follow design documents template. |
| Risks | Lack of experience in system designing.  Do not understand requirements clearly.  Requirement change quickly. |

##### System Implementation and Testing

|  |  |
| --- | --- |
| Description | Implement System follow System Design Description document.  Execute unit testing.  Integrate all parts into complete system.  Integration test and system test. |
| Deliverables | Source code.  Unit test document. |
| Resources Needed | 111 man-days |
| Dependencies and Constraints | Follow SDD.  Keeping schedule. |
| Risks | Developers may not misunderstand the design.  Testers are not experience in testing.  Lack of experience in integration.  Resources cannot keeping schedule. |

##### System User’s Manual

|  |  |
| --- | --- |
| Description | Prepare guide document for users. |
| Deliverables | System User’s Manual document. |
| Resources Needed | 6 man-days |
| Dependencies and Constraints | Depend on SDD document.  The guide must easy to understand. |
| Risks | User may not understand the guide |

#### Task Sheet: Assignments and Timetable

### Convention Rules

Reference to Microsoft C# Programming Guide – C# Coding Conventions.

<http://msdn.microsoft.com/en-us/library/vstudio/ff926074.aspx>