**MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

**Timetable Management Support Tools**

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| **Capstone Project code** | TMST |

-Ho Chi Minh City, 05/01/2015-

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# Definitions, Acronyms, and Abbreviations

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| **Name** | **Definition** |
|  |  |

# Introduction

## Project Information

* Project name: **Timetable Management Support Tools**
* Project Code: **TMST**
* Product Type: **Desktop application**
* Start Date: **January 5th, 2015**
* End Date: **May 10th, 2015**

## Introduction

As time, the amounts of FPT University's instructors and students are increasing, beside the courses have different priorities, so creating and managing timetable in a semester is extremely huge job. This job requires accurate, timely and easy updating when there are changes, etc.

With existing traditional methods, this work has been partially solved but still on limits. Staff must spend lots of time to check conflicts of the timetable as well as send notification e-mails to each instructor. Whenever the timetable is changed, updating processes spend lots of time and could carry undesired mistakes. Checking inaccuracy is only supported by excel and eyes, there is no assurance, etc.

Therefore, our system would be created to solve these problems.

## Current Situation

Staff have to gather information from previous semester as number of students, course plans, classes, classrooms, instructors, etc. to create timetable for next semester. That information is entered line by line into excel files and have to do more to combine them together and create a scheduled timetable. After information is correct, the scheduled timetable is updated and completed. Staff have to send them to instructors via e-mail as well as upload to website and notify students before each block. Every month, staff calculate the timekeeping based on timetable and send it to each instructor for confirming. When anything change, staff have to modify timetable. This work takes a lot of time.

There was a system called “Timetable and Teaching Session Management” that could support staff solving work softer. Some features of that system provide:

* Import Excel File contains information about semester.
* Manage import data.
* Check conflict data.
* Send mail to instructor.

However, that system still contains some limitations:

* Staff has to input information to a new Excel template for system can parse data.
* System did not support suggesting timetable.
* System did not support exporting data to excel file.
* System is a web application so internet connection is required. This thing reduces usability of Staff when internet connection is not available.

## Problem Definition

* It may carry mistakes and they take a lot of time to find.
* Many similar content mails must be sent in the same time by hand.
* The management of many files at the same time could make staff confused.
* The timetable have to be completed in a very early period base on the previous semester timetable, so it would to be changed many times. That cost lots of time and efforts.
* The amount of input data is huge, so mistakes often occur.
* When new staff are assigned to this work, it is hard for them to approach.

## Proposed Solution

Building the desktop application supports the FPT staff in managing the timetable. This tool provides the necessary functions for staff so they can perform their work easier and faster. Their work would be optimized and automated in some steps in order to reduce time and unnecessary errors. Besides that, this system should send specific things involved each instructors via e-mail and notify to students whereas there is any change.

### **Feature functions**

* Upload planned semester, students list, etc. into system then parse them to support staff in creating the timetable.
* Created timetable would be checked conflict then adjusted.
* Suggest the guide project schedule depending the available information.
* Support to create the room usage schedule based on the timetable.
* Calculate and send timekeeping.
* Send/Synchronize the timetable to instructors' mail.
* Export automatically formatted excel files.

### **Advantage and disadvantage**

* Advantages:
  + Create timetable faster by importing excel files.
  + Check conflicts easier, faster, and more accurate.
  + The mailing is done automatically, quickly, accurately and fully. Avoid omission and wrong destination/contents.
  + No need manage many files with duplicate contents at the same time.
  + Updated timetable would be flexible.
* Disadvantages:
  + Unable many staff participate in the same time.
  + The system would not check the behaviours of user, so if the inputted information is not correct, output would be wrong.
  + If inputted file format is not correct or change, the process have to start over.

## Functional Requirement

Function requirements of the system are listed as below:

### **Data Management**

* System parses data from excel file automatically.
* Staff can input data manually.
* Export automatically formatted excel files.

### Manage the Timetable

* Support to create the timetable with planned semester, students list, etc.
* Checks conflict and adjust timetable.
* Calculate the timekeeping.
* Send/Synchronize the timetable to instructors' mail.
* Suggest the guide project schedule depending the available information.

### Manage the room

* Support to create the room usage schedule based on the timetable.

## Role and Responsibility

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| --- | --- | --- | --- | --- |
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**Table 1: Roles and Responsibility**