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|  | **MINISTRY OF EDUCATION AND TRAINING** |

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| **FPT UNIVERSITY** |

Time and Attendance System

Software Requirement Specification

Project code: FUTAS

Document code : FUTAS SRS

Hà Nội, January, 2013

Record of change

\*A: Added , M : Modified, D : Deleted

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Signature Page

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1. Introduction

1.1. Purpose

This document is created as Software Requirement Specification for project, in scope of Capstone Project at FPT University

1.2. Definitions and Acronyms

|  |  |  |
| --- | --- | --- |
| Acronym | Definition | Note |
| PM | Project Manager |  |
| UC | Use case |  |
| OT | Over Time |  |
| FUTAS | Time and Attendance system |  |

1.3. Reference

|  |  |  |  |
| --- | --- | --- | --- |
| No | Title | Version | Description |
| 1 | FUTAS-Introduction | 1.2 | Introduction of Time and Attendance System |
| 2 | FUTAS-Project Plan | 1.0 | Project plan of Time and Attendance System |

2. Functional requirement

2.1. Data reading

2.1.1. Devices

-FUTAS includes main devices

+Swipe card : stored ID, information of employee

+Reading head: gather information scanned cards

+Switch: connect reading head and server

+Server: receive and handle data

2.1.2. Connection type

-FUTAS use Ethernet connection only

-FUTAS use electronic net of owned company

2.2. Manage shifts

2.2.1. Setup main shift

2.2.1.1. Add main shift

-In module main shifts has button “Add shift” to add new main shift

-Main shift include:

+Time Start

+Tine End

-New shift will showed in screen

2.2.1.2. Delete main shift

-In module main shifts has button “Delete shift” to delete selected shift

-Shift has been deleted and is not showed in screen

2.2.1.3. Edit main shift

- In module main shifts has button “Edit shift” to edit main shift

-Shift has been edited like optional and still showed in screen

2.2.1.4. Set shift ’s time for specific department

-Each department has start shift time and end shift time different with others

2.2.1.5. Show shift by date, month

- In module main shifts has button “show shift” to display shifts by date, month.

- In module main shifts has button “Print” to export data to file excel

2.2.2. Manage Over Time

2.2.2.1. Add OT

-In module manage OT has button “Add OT” to add new OT

-OT includes :

+Time Start

+Tine End

-New OT will showed in screen

2.2.1.2. Delete OT

-In module OT has button “Delete OT to delete selected OT

-OT has been deleted and is not showed in screen

2.2.1.3. Edit OT

- In module OT has button “Edit OT” to edit OT

-OT has been edited like optional and still showed in screen

2.2.2.1. Registration overtime for staff by day

- In module OT has button “OT registered” to register employee in OT

-In module OT has button “show OT today” to display OT table registration

-OT table registration includes

+Name of employee OT

+Name of group OT

+Time OT

+OT day registered

2.2.2.2. Collect and display data overtime for staff by month

- In module OT button “Show OT this month” to display OT table by month

- OT table for specific by month includes

+Name of employee OT

+Name of group OT

+OT days registered

+Total time OT in this month

2.2.2.3. Display table of specific staff ’s overtime by month

- In module OT has text area “Name employee” and button “Show OT time” to display table of specific staff ‘s OT

- Table of specific staff ‘s OT includes

+Name of employee OT

+OT days registered

+Total time OT in this month

2.2.2.4. Setup rule OT

-Setup code for each OT circumstance

+OT150: normal days

+OT180: normal day at night

+OT200: weekend days

+OT230: weekend days at night

+OT300: holidays

+OT330: holidays at night

2.2.2.5. Display OT in timekeeping summary report

2.2.3. Customization shifts

2.2.3.1. Add customization shifts

-In module customization shifts has button “Add shift” to add new customization shifts

- Customization shifts include:

+Time Start

+Tine End

-New shift will showed in screen

2.2.1.2. Delete customization shifts

-In module customization shifts has button “Delete shift” to delete selected shift

-Shift has been deleted and is not showed in screen

2.2.1.3. Edit customization shifts

- In module customization shifts has button “Edit shift” to edit customization shifts

-Shift has been edited like optional and still showed in screen

2.3. Manage employees

2.3.1. Manage single employee

2.3.1.1. Add new employee

-In module manage single employee has button “Add employee” to add new employee form.

-When detected new ID card, display add new employee form

-New employee form has basic information

+Name of employee

+Personal ID

+Join date

+Day of birth

+Group ID

-New employee is successfully added to database

2.3.1.2. Delete employee

-In module manage single employee has button “Delete employee” to delete selected employee

-Chosen employee is successfully deleted in database

2.3.1.3. Edit employee

- In module manage single employee has button “Edit employee” to edit selected employee

-Basic information of employee is edited like optional and saved in database

2.3.1.4. View employee

- In module manage single employee has button “View employee” to display information of selected employee

-Information of selected employee includes:

+Name of employee

+Personal ID

+Join date

+Day of birth

+Group ID

+Days of leave left

2.3.2. Manage group employee

2.3.2.1. Add new group

-In module manage group employee has button “Add new group” to add new group of employee form

-New group of employee form has basic information

+Group name

+Group ID

+Department belong

+Work shift

-New group of employee is added successfully in database

2.3.2.2. Delete group

- In module manage group employee has button “Delete group” to delete selected group

-Group has been selected is successfully deleted in database

2.3.2.3. Edit group

- In module manage group employee has button “Edit group” to edit selected group

-Group has been selected is edited successfully and saved in database

2.3.2.4. Add/ remove employee in group

- In module manage group employee has button “Add employee”/ “Remove employee” to add/remove selected employee

-Employee has been selected is add/remove successfully and saved in database

2.3.2.5. View group information

- In module manage group employee has button “View group” to view information of selected group

-Information of group includes:

+Group name

+Group ID

+Department belong

+Work shift

+Member of group

+Schedule of group

2.3.3. Search employee / group

-In module manage employee has text area to input name of employee / group and button “Search” to display information of employee / group

2.4. Manage days on leave

2.4.1. Normal days on leave

2.4.1.1. Setup list of days on leave

-Setup list of days on leave, information of days on leave

-Information of days on leave include:

+Type of days on leave

+Max number of days on leave

+Payment/ not payment

2.4.1.2. Registered days on leave for employee

- In module manage days on leave has button “Register” to register days on leave for single employee

-Display reason of days on leave:

+annual holiday

+celebration

+new year

+sick

+give birth to child

2.4.1.3. Manage annual holiday

-Display employee ‘s days on leave has been used, max number days on leave

-Automatic calculate seniority days on leave

- Days on leave of previous left will be added in new year

-Calculate days on leave at any moment

2.4.2. Abnormal days on leave

- Handle half day on leave

- Handle bonus work hours

- Handle exception

2.5. Manage timekeeping and payroll

2.5.1. Timekeeping

2.5.1.1. Connecting with timekeeping machine

-Allow setup ID card of each employee

-Load data from timekeeping

-Load data scanned card from memory of reading card

-Data process: Data from ID card scanned, time, combine with manage shift is transfer time in, time out, remove duplicate data

2.5.1.2. Data process and edit

-Use filter to search information about time in, out of employee

-Connect data with registered days on leave information

-Support handle invalid data, missing data

-Export data to excel, access, XML

2.5.2 Payroll

-Payroll is automatic calculate in the end of month

-Payroll = man day \* level salary

2.6. Summary and report

2.6.1. Dump data

- detailed report : display all information about the work shift, timekeeping of all employees. Administrator can search information of an employee, of a group and can add, edit, remove

- personal attendance report : display all record about attendance of all employees for a day, a week, a month. Administrator can search information of an employee, of a group and can add, edit, remove

- shifts report : display all shifts of company. Administrator can add, edit, remove a shift

- OT registration report : display all record about overtime registration of all employees. Administrator can add, edit, remove records.

- going late, early report : display state of the employee’s work time. Administrator can add, edit, remove records.

- Statistical report : display state of the group’s work time. Administrator can add, edit, remove records.

- Export data in excel : all reports can export data in Microsoft office excel.

2.6.2. Analyze report

-Report list of employee with type of days on leave

-Report summary monthly, quarterly, yearly to evaluate work performance

3. Non-functional requirement

3.1. Performance:  
- The system must be nimble enough to allow for easy changes.  
- The response time for install system should be less than 24 hours.  
- The response time for screen open, for information loading should be less than 5s.  
- Email messages to absent employees should be sent within one hour of the conclusion of a group.  
- Costs of upgrading and maintaining a program must be reasonable, or alternatives must be sought to meet the needs

3.2. Reliability:   
- Information entered yesterday in the system should be there today.   
- If the system broken, 24 hours is available to get the system back up again.   
- Payroll checks and reports must be mathematically correct.  
  
3.3. Security:  
- The system must be secured and the information will be kept safe.  
- Admin is only person should permitted to view and edit information in the database of the system.

3.4. Availability:  
- Database servers will operate 24 hours a day, 7 days a week.  
  
3.5. System management:  
- Database backup should be done often and be extremely secure. The downtime will be between 2.00 am to 4.00 am.