

Energy Monitering System Software v 1.0

Group ID: IT-F18-04

AQIB AFTAB

01-235152-010

Supervisor Sir Suroor Zaidi

Bachelors of Science in Information and Technology

Department of Computer Science, Bahria University, Islamabad.

Abstract

Energy Monitering Management Software (EMS) is a general term and category referring to a variety of energy-related software applications which may provide utility bill tracking, and real-time metering by collecting the data through comma seperated file(csv). An user of the application can see his/her records of monthly consumptions of the energy consumed. The purpose of this project is to deliver the end-users a overall consumption of the energy that they use in real time so that users can manage their consumptions according and to see their consumption records on the software. There are many problems that I faced in my project as the company 'CrestPak Electronics' allows me to work only with web development tools. Their requirements are to work with PHP on the back-end and bootstrap at the front-end. There are differnt web developments tools and techniques that I used to fulfil the requirement of the company. PHP, BootStrap, SublimeText, Mysql database and other web technologies. This project will definitely provide efficiency and allow users to check their monthly comsumptions status through graphs as well.

Contents

bstra	ect	i
Intr	roduction	1
1.1	Project Introduction	1
1.2	Existing Examples / Solutions	1
1.3	Business Scope	2
1.4		2
		2
		2
		3
Lite	erature Review	4
2.1	PHP	4
2.2		
2.3		4
2.4		5
2.5		
Rec	uirement Specification and Analysis	6
2440 (44		6
3.6		
	Lite 2.1 2.2 2.3 2.4 2.5 Rec 3.1 3.2 3.3 3.4 3.5	Introduction 1.1 Project Introduction 1.2 Existing Examples / Solutions 1.3 Business Scope 1.4 Useful Tools and Technologies 1.4.1 PHP 1.4.2 Bootstrap 1.4.3 Sublime Text Literature Review 2.1 PHP 2.2 Bootstrap 2.3 Java Script 2.4 MySQL 2.5 COMPARISON OF PREVIOUS AND LATEST TRENDS TECHNOLOGIES Requirement Specification and Analysis 3.1 Functional Requirement 3.2 Nonfunctional Requirement 3.3 Selected Functional Requirements 3.4 System Use Case Modeling 3.5 System Sequence diagrams 2 1

4	Syst	tem Design	35		
	4.1	Software Architecture	35		
	4.2	Class Diagram	37		
	4.3	Sequence Diagram	38		
	4.4	Entity Relationship Diagram	49		
	4.5	Database Schema	50		
	4.6	User Interface Design	51		
5	Soft	ware Implementation 5	54		
	5.1	Coding Standards	54		
			54		
			54		
		5.1.3 Naming Convention	55		
	5.2		55		
	5.3	Software Description	55		
			56		
		5.3.2 Register user	58		
		5.3.3 Dashboard	60		
		5.3.4 All Analyzer Bar Graph	62		
		5.3.5 Line Chart	64		
		5.3.6 Bill History	66		
6	Soft	ware Testing	68		
	6.1	Testing Methodology	68		
	6.2		68		
	6.3	Test Cases	68		
7	Con	clusion	80		
Re	References 81				