

Water Billing Solution

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Abstract: Web based full featured, affordable, easy to use Water Billing solution Standard Software Package. It integrates seamlessly to make a flexible and user-friendly software package. The Main functions that Administrative Module is to manage User Creation, User Privilege Setting, Change Tap Details, Block User and Collection details with all reports totally it include entire life cycle of water board functionalities. The main objective of water billing solution is to provide easy service to water related functionalities and it overcomes the all difficulties they are facing in manual process. Water billing application is fully features due to it is having different module functionalities like administration, monitor, control, authentication, authorization, ward based privileges settings, master values settings, database settings, one time demand generation, forms based authentication, biometric login validation, SMS alerts for data has been changed and different types of reports like decision making reports, meetings reports, consumer reports, daily collection reports, demand distributed reports, DCB reports.

Keywords: Administrations, Water billing.

1. Introduction

The Water Billing Solution is Web based full featured, affordable, easy to use Water Tax Standard Software Package. It integrates seamlessly to make a flexible and user-friendly software package. The Main functions that Water billing application is going to manage New Tap Registration, Demand Generation, Demand distribution and Collection details with all reports totally it include entire life cycle of water board functionalities. Existing System: As per our survey existing system is completely manual system that is for different activities undertaking in water boards are handling manually. The water billing services like new tap connection, demand generation, demand distribution, demand collection and different reports generation are manual. Drawbacks of Existing System includes, everything is manual work maintained in catalogue or file system, Unable to keep long-term records. Possible to lose records or damage the records due to physical file storage. Difficulty in searching records Expensive Difficulty to monitor and control the whole system. The proposed system is a web as well as mobile based fully featured and affordable application so we can easily automate all different services in this application as per customer needs. Proposed system had services like customer records maintenance, administration, demand generation and demand distribution. Benefits of the Proposed System includes, Redundancy is avoided., Demand Generation in one click, Report Generation., Authentication, Administration and Control, Mobile based demand distribution, Revenue collection form cash counter module, GPS based report generate, GPS based authentication

Modules of the Water Billing Solution:

- Administrative
- Masters
- Application
- Cash Counter
- SMS
- Reports

Administrative: As you aware of web application ready then definitely you may think there might be an admin module.

Masters: included number of sub modules which are required frequently in our application, totally aim of creation of master pages in our application is create once use many times. These reusability and reduce the user inputs we planned to include another module in our water board web application is Masters.

Application: This module is brain of our water board application because here new tap initiation start also this module consist demand generation, reset the demand, collection details etc.

Cash Counter Module: Cash Counter module is one of the important and very useful Module of WTAX applications. It helps in generating the revenues for the UBL's.

SMS Module: SMS Configuration module helps in sending the daily reports, acknowledgments to staff and also to the public. This module works on flag which has to configure at the database end and keys at the web configuration. In the database if flag is set to 1 then SMS will send. And in the web configuration file.

- a. Enable SMS, Enable SMS with Template Id if these keys are set to true then only SMS will send.
- b. Enable Scheduled SMS–If this key is true, then only SMS is Scheduled or else daily reports will Not be sent *Administrative Module [Option]*
- Every application is under the control of administrative activities so in the same way in this application also there is admin user. Yes, its right once we successful logged on to application then first module that include in our application



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is administrative module. There is question why we want administrative module, simple answer is that to differentiate work, authentication, settings, monitor and control over the application etc.

- There are many more futures include in this Admin module
 - o User Creation
 - o Privilege Setting
 - o Bio Authentication
 - o Role Wise Privilege Setting
 - o Ward Assignment
 - o Mobile Print Fields Setting
 - User Mobile Module
 - o Trace User
 - o Block User
 - Change taps status
 - Fixed to meter conversion
 - Change Tap Details

2. System Design

The system design document describes the system requirements, operating environment, system and subsystem architecture, files and database design, input formats, output layouts, humans-machine interface, detailed design, processing logic, and external interface.

A. Cascading Style Sheets (CSS)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

The name cascading comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable. The CSS specifications are maintained by the World Wide Web Consortium (W3C).

B. Database tables

Login:

Log	in_tbl: Query(P_DATA\WATE	R.MDF) ×	BlockUser.aspx
	UserType	username	pass	UID
•	Admin	Admin	123	1
	User	xyz	123	4
	Agent	abc	123	6
	User	pqr	123	7
	User	rumis	123	8
	NULL	NULL	NULL	NULL

Fig. 1. Login Database Design

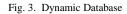
User Profile:

legi	ster_tbit Que	P_DATA\WATE	RMDF) × Ras	the Query d. F	DATA\WATER	MDF) Log	pin_tbl: Query(P_DATA\WATE	R.MDF)	BlockUser.aspx	BlockUse		
	Password	FullName	MobileNo	EmailId	Department	Designation	LoginTime_	LoginTime	UserType	LoginMode	Userid	Status	UserType_II
	9901111	soumya	8123771476	sou@gmail	amrin	inamdar	1:10 AM	1:25 AM	Web	Password	6	0	1
	soumya	talawar	8123771476	sou@gmail	amrin	inamdar	12:12:00	12:03:45:	Web	Password	5	1	2
	1234	amrin	65799	sss@gmail.c	amrin	inemdar	1:30 AM	1:30 AM	Web	Password	7	0	2
	679	sumi	8618839468	sss@gmailc_	anu	kallolli	1:25 AM	1:05 AM	Mobile		8	1	2
	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Fig. 2. User Profile database design

Dynamic Concept:

Reg_	tbl: Query(dP_		IDF)	×
	Department	Designation		
•	amrin	inamdar		
	amrin	shaik		
	amrin	jamadar		
	anu	kallolli		
	anu	talawar		
	pinky	patill		
	pinky	madhabavi		
•	NULL	NULL		



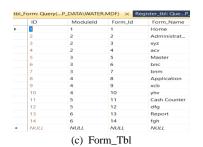
User Privilege Setting:

	ID	ModuleId	Module_Na
•	1	1	Home
	2	2	Administrat
	3	3	Master
	4	4	Application
	5	5	Cash Counter
	6	6	Report
	NULL	NULL	NULL

(a) Module_Tbl

tbl_	Module_Aut	heDATA\WATEF	R.MDF) × tb	I_Module: QuerP
	ID	ModuleId	canview	UID
۶.	1	1	1	2
	2	2	0	2
	3	3	1	2
	4	4	1	2
	5	5	1	2
	6	6	1	2
	NULL	NULL	NULL	NULL

(b) Module_Authentication_Tbl



 Bit
 Form
 Charge
 DATAWARERAUDP
 Weighter
 Register
 <thRegister</th>
 Register
 Re

(d) Form_Authentication-tbl Fig. 4. User Privilege Setting Design



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C. Forms





Fig. 7. Admin Form



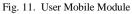
 Image: Constraint Constraint
 Market:
 Market:
 Application
 Can A Counter
 Report
 DigiPile

Fig. 9. User Privilege Setting



Fig. 10. Ward Assignment

# H2OPE	Home	Adı	ministrator Mar	sters	Application	Cash Counter	Reports	DigiFile	
dministrator	User Mobile N	lodule							
User Profile	Telds are mendelory	louule							
User privlinge settings									
Ward Assignment				*User:	Dijapur				
User Nobile Module		Select	Module Name	AL			Search Orieteria	All	
BII) Receipt Print Fields Configurat			Fired Derrand				Seallo	12	
Bio Authentication			Field Becelat	0			Consumention		
Block User									
Change Tap Status			Neter Demand				Helefiko		
Fixed To Heler Conversion		0	Neter Receipt				QRCode		
Change Tap Details		0	GeoStamping						
Receipt Transfer		0	Valve And Tank Geo Location						
Hoc Address Authentication		0	Beauts	2					
User IMEI Number Mapping		0	Survey Details						
Reset Peseword			Settings						
Receipt Split Heater		0	occesito	Ed.					
Backup Database Profile Pansword									



H2OPE	Home	Administrator	Masters	Application	Cash Counter	Reports	DigiFile	
inistrator 🏻	Bio Authentical	tion						
User Profile	Fields are mendatory							
User privilege settings						Approver List		
Ward Assignment	*Select.Activity:	Tap Registration	×	Activity Name	User Name		th Hade	Delete
User Mobile Module								
Bill/Receipt Print Fields Configurat	*Department	WaterTax		Top Registration	Test		Bo	Delete
Bio Authentication				Tap Registration	alkod		80%	Delete
Block User	*Designation: Staff			Tap Registration	admin	P	exercited	Delete
Change Tap Status								
Read To-Mater Conversion	*User Norne:	deepo						
Change Tap Details					Optional a	Approver List		
Receipt Transfer	*Authentication Type:	# Mandatory Optional		Activity Name	User Name	A.	th Hode	Delete
Mac Address Authentication	Rethantington Made	Research Other Other		Can Residuation	Index		Bo	Delete
User IMEI Number Happing		WPRENDS CIRCUID		Tap Registration	201		hneer	Delete
Reset Persword								
Recolpt Split Master								
Backup Database	Sinc	Rev						
Profile Password								

Fig. 12. Bio Authentication

Bijapur local								ADMN J
∔ H2OPE	Home	Administra	tor Masters	Application	Cash Counter	Reports	DigiFile	
Administrator	Block User							
User Profile	Fields are mendelow							
User privilege settings	The state of the state of the							
Wend Assignment				*Chan: 2535				
User Mobile Module					Details			
BillyReceipt Print Fields Configurat	_	Nome: assas		Pade			(mail:adgreat.com	
Bio Authentikation		Department: WaterTex		Dealor		0.000		
Block User								
Change Tap Status				# Block				
Foud To Mater Conversion								
Change Tap Details			188					
Receipt Transfer		"Remarks:						
Noc Address Authentication								
User IMEI Number Mapping					plate			
Reset Passary								
Receipt Spilt Haster								
Backup Debubane								
Profile Password								
Townedier all WARKs In 2417								

Fig. 13. Block User

Bijapur local								ADMN 1
I H2OPE	Home	Administrator	Masters	Application	Cash Counter	Reports	DigiFile	
Administrator	Change Tap Stal	tue						
User Profile	* Rolds are mondatary	(0.5						
User privilege seffings								
Word Assignment	-	Search						
User Hobie Module	*2me :	tops-zore v						
Bill/Excelpt Print Fields Configurat	"Hed	2 10						
Bio Authoritication								
Block User	Konsumer No:	78						
Change Tap Status		OR						
Pound To Plater Conversion	*Tap No.	54						
Change Tap Details								
Receipt Transfer	Sequence No:	456						
Mac Address Authentication								
User IMEI Number Hepping		Show						
Raset Password		1000						
Receipt Split Moster								
Backup Database								
Profile Password								
Transfer at 19875 to 24/7								

Fig. 14. Change Tap Status

3. Report Generation

In our Water billing solution we are having different types of reports Like,

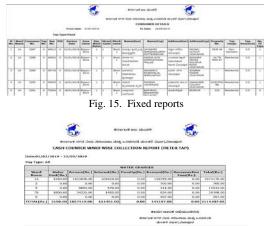


Fig. 16. Daily collection reports





4. Conclusion

The primary objective of my project is to provide the interactive service to the employees and higher authorities. Different types of services are provided to both the employees

and higher authorities.

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