



## **SUMMER INTERNSHIP REPORT**

*On*

## **CHEMICAL INVENTORY MANAGEMENT SOFTWARE DEVELOPMENT**

**Under the able Guidance of**

**Mr. Rajneesh Tiwari**

**Director-Development Projects**

**Practice Lead-**

**Systems Platform (Supervisory control),**

**Schneider Electric**

**By:**

**Srikar Krishna**

**Student-**

**B. Tech Computer Science and Engineering,**

**National Institute of Technology,**

**Silchar.**

## **CANDIDATE'S DECLARATION**

I hereby certify that the SIP project work entitled 'Chemical Inventory Management Software Development' in partial fulfillment of the requirements for the award of the Degree of BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE AND ENGINEERING and submitted to the Wonderware Systems Platform Department at Schneider Electric, Hyderabad is an authentic record of my work carried out during a period from 15<sup>th</sup> May, 2017 to 10<sup>th</sup> July, 2017 under the supervision of Mr. Rajneesh Tiwari, Director-Development Projects, Practice Lead- Systems Platform (Supervisory control), Schneider Electric, Hyderabad.

The matter presented in this project has not been submitted by me for the award of any other degree of this or any other University.

**Srikar Krishna,  
Sch. No. 14-1-5-091**

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date: \_\_\_\_\_ 2017

Mr. Rajneesh Tiwari  
(Director-Development Projects)

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## **ACKNOWLEDGMENTS**

During my summer internship, the staff at Schneider Electric and persons guiding me was very helpful and extended their valuable guidance and help whenever required for the project and its associated things, which I worked on.

I am very thankful to my guide Mr. Rajneesh Tiwari for his invaluable guidance and advice during my Summer Internship.

I am thankful to Mr. Hari Krishna Chalumuri for his guidance, friendly support & coordination during my stay at Schneider Electric.

I am also very grateful to Mr. Sandeep Sharma who helped me in the project by sharing his vast experience, giving valuable direction to the project and for his great cooperation and help especially in the day to day tasks and understanding the basics of the system, Mr. Saliquir Raheman for helping in developing the application and making me learn the new tools, Mr. Murali Palaka who was instrumental in making me understand the complex problems and build them and Mr. Lakshay Mundeja who was always ready to extend any technical support at a short notice.

I would also like to extend my thanks to Mr. Suresh Vippera, Mr. Lakshminarayana Rao and Mr. Aakash Shukla for providing feedback and correcting me at regular intervals.

Overall, the above team made my stay at Schneider Electric an enjoyable and unforgettable one and I am grateful to them for making it happen so.

## EXECUTIVE SUMMARY

My two-month Industrial Internship Program work term was with the Schneider Electric, Hyderabad. I was involved in the area of designing and building web pages without having a need to install any html editor based software and also which can be used by any novice user. This report will cover some background information on the projects I was involved in, as well as details on how the projects were developed.

There are two major parts of the project that I had a significant role in.

The first part involved gaining a good understanding of Code-First Entity Framework, which is mainly useful in Domain Driven Design. The existing project that was going for part one year was using Code-First Entity Framework in which I had to join.

The second part was on designing and developing code for two screens namely Master Data Configuration and Chemical Stock. I was also subject to build model pages for two more screens namely Tank Flow and Tank Calculations, to understand the work flow and for demo purpose. The other works included preparing Test case documents for all the other screens in the module, execute them to check the existing functionality and reported as well as debugged the errors found. At last I was also involved partly in making user interface of the screens look responsive for any size of windows and various platforms.

I acquired many new technical skills throughout my work term. Firstly, I got introduced to Code First Entity Framework, which was really interesting to learn about. Also, I acquired new knowledge in the area of Web Application Development by learning how to use Kendo UI, which is a comprehensive framework for building modern web and mobile apps with HTML5 and JavaScript (Angular JS) and also Visual Studio, which offer a complete package for building a fully functional Web Application. Then I got introduced to the area of research and how to approach it. Most importantly, the work experience was very good which included good fellowship, cooperative teamwork and accepting responsibilities. Although I spent a lot of time learning new things, I found that I was well trained in certain areas that helped me substantially in my project. This report concludes with my overall impressions of my work experience as well as my opinion of the Industrial Internship Program in general.

**\*Actual Platform names not revealed as per the NDA done between the client and Schneider Electric**

# INTRODUCTION

## **Purpose of this document**

The intended purpose of this document is to provide my mentor Mr. Rajneesh Tiwari with a detailed documentation of the work done during my 8 weeks of job training (May 15<sup>th</sup> – July 10<sup>th</sup>) at the Systems Platform Team, Schneider Electric-Hyderabad. Furthermore, as the mentioned job training is required within my conditions of study at the National Institute of Technology, Silchar. This document also provides the mandatory project report which is supposed to be written accompany- during the training time.

## **About the Company**

Schneider Electric is an innovative and trusted provider of software and services that improve productivity and profitability for production, manufacturing and infrastructure industries. Its software solutions allow customers to deliver sustainable performance with flexibility and agility to address evolving market requirements. Wonderware is the global leading brand of industrial software including Human Machine Interface (HMI), SCADA, MES, real-time Operations Management and Production Information Management software. Wonderware solutions enable production and industrial operations to synchronize with business objectives to achieve speed, flexibility and sustained profitability. Wonderware software delivers significant cost benefits for designing, building, deploying and maintaining robust applications for manufacturing and infrastructure operations.

## **Project Background**

The main objective of this module is to allow the user to view the current consumption and status of Chemical Inventory. This module provide user to configure the calculation of different tanks and provide information which can guide to make informed decision resulting in optimum use of chemical consumption by providing visual interface for monitoring & analysis of chemical consumption. Editing of the existing calculation shall be done through workflow approval.

Facility - Tank – Pump – Chemical – Mapping:

As part of Master Data configuration user will be allowed to manage Facility, Tank chemical and Pump details. This will act as master table for other tables. Changes made will be reflected back in the database.

Chemical Stock:

Chemical Stock Screen is used to record all the entries of the Chemical into the Facility, i.e. Received and Dispatched details, with time and volume.

Tank Flow Chart (Model):

Tank Flow chart is used to display the flow rate from the tank for every given interval of time.

Tank Calculation Grid (Model):

Tank Calculation grid contains all the details of tank, with an option for user to tank factor as input inside a pop-up which opens on button click of every grid row.

## **Problem Statement**

There were a series of problems that made this project a necessary requirement. The very first was to provide information which can guide to make informed decision resulting in optimum use of chemical consumption by providing visual interface for monitoring & analysis of chemical consumption.

## **System Requirements**

### **Hardware requirements:**

An efficient and high performance computer system with high computational and processing speed, sufficient memory (volatile memory) is needed.

### **Software requirements:**

#### **SQL-Server**

Microsoft SQL Server 2012 is a relational database management system (RDBMS) designed for the enterprise environment. Like its predecessors, SQL Server 2012 comprises a set of programming extensions to enhance the Structured Query Language (SQL), a standard interactive and programming language for getting information from and updating a database.

Microsoft SQL Server 2012, which supplants SQL Server 2008 R2, offers new capabilities, notable among them the following.

- ColumnStore indexes: Read-only indexes that group data, streamlining the processing of large data warehouse queries.
- Support for Windows Server Core: This is a stripped-down version that places a far lower demand on computer resources than a full install does.
- PowerView: Makes it possible to generate mash-ups of business intelligence (BI) reports.
- Enhanced Auditing: Users can customize their audit logs to accommodate a wider range of events with greater flexibility than was previously possible.
- AlwaysOn: Users can fail over multiple databases and read secondary copies, enhancing disaster recovery (DR) operations.
- Distributed Replay: A workload can be taken from a production server and played on another server to test it under realistic conditions before deploying it.

## Microsoft Visual Studio -

- It is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs for Microsoft Windows, as well as web sites, web apps, web services and mobile apps.
- Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.
- The integrated debugger works both as a source-level debugger and a machine-level debugger. The built-in tools include a code profiler, forms designer for building GUI applications, web designer, class designer, and database schema designer.



# **DESIGN**

## **System Design**

### **Application Architecture Principles**

- Functionalities of application are to be split into sub-modules with minimum inter-dependency to avoid total failure of the application.
- Each module should have specific defined functionalities with no-overlap with other modules
- Application should be scalable with minimum efforts and/or changes on software and / or hardware pertaining to:

### **Configuration Principles / Standards**

- Chemical Inventory and Tracking Management module shall use module specific data store to keep the historical data and configuration details. This configuration can be accessed with the help of Application configuration user interface.

### **User Interface Standards**

- The user interface is the web portal based UI with HTML5 as base and controls such as Kendo UI from Telerik, SSRS are used to render visualization and controls
- All frame panels within each webpage should automatically get adjusted to 100% of screen width based on screen resolution.
- All screens will be intuitive for the users (with knowledge on application functionality) to easily understand, navigate between pages.

## Software Architecture-

### Presentation Tier:

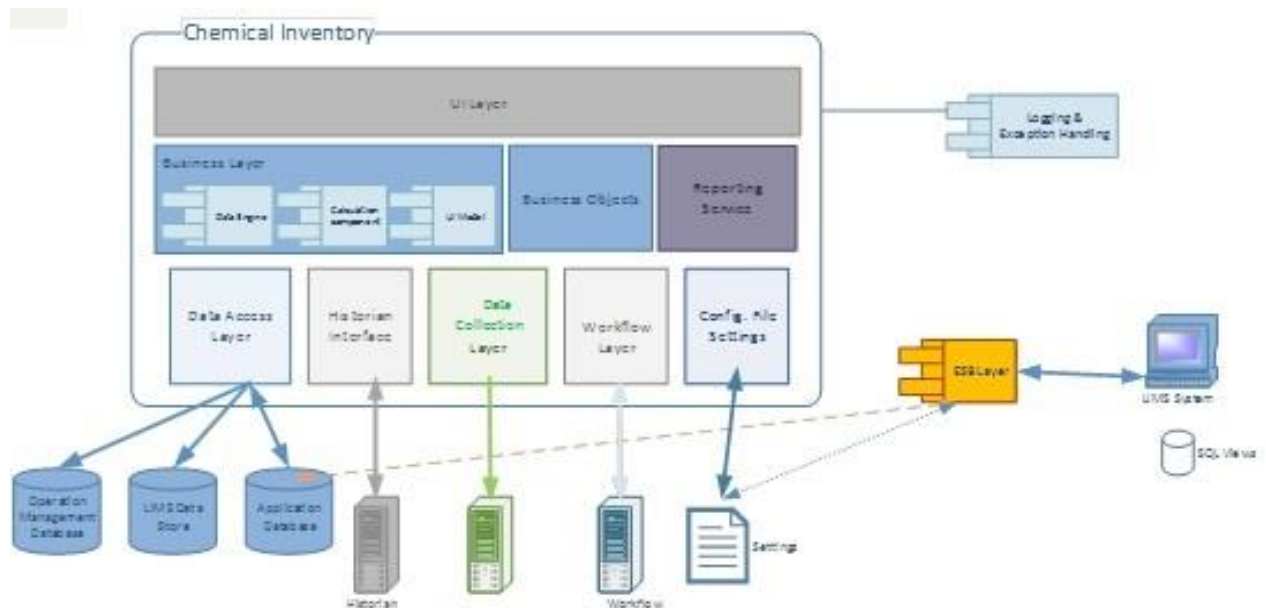
Presentation Tier consists of Kendo UI controls, Twitter bootstrap (all front end framework) and JQuery (for client side scripting). This also will have style sheets and images.

### Business Tier:

Business tier will have objects like classes, interfaces etc. which will have the application specific business methods, application design patterns and utility classes.

### Data Tier:

Data tier is the data access framework which will feed data to all the data store related requests. Data tier will be using Microsoft Entity framework 6.0 as the object relational mapping framework in order to connect to data store. This tier will fetch the data from application data store and operation management data store.











# WORK

## Master Data Configuration:









Chemical Inventory and Tracking Management module requires the following master data inputs for the configuration.

- Facility
- Chemical
- Tank
- Pump
- Mapping









**Figure-** Design for Facility, Chemical, Tank, Pump and Mapping Tabs of Configuration screen.

Facility	Chemical	Tank	Pump	Mapping
Facility Name	Description	Remarks	Action	
27	This is 27 of		 	
28	This is 28 of		 	
17	This is 17 of		 	
16	This is 17 of		 	









  

Facility	Chemical	Tank	Pump	Mapping
Chemical Name	Description	Remarks	Action	
Demulsifier	This for crude oil		 	
Methanol	For Gas back flow		 	
Biocide A	For wash water		 	
Biocide B	For wash water		 	





  

Tank Name	Description	Remarks	Tank Factor	Tank Factor Tag Name	Action
O941 A/B	This for crude oil		5.31	Tank1.value	 
O946	For Gas back flow		0.75	Tank2.value	 
O944 A	For wash water		4.64	Tank3.value	 
O944 B	For wash water		4.64	Tank4.value	 

Pump Name	Description	Remarks	Pump Curve	Approval Status	Disable
Pump 1	This for crude oil		<input type="text" value="--"/>	Approved	 
Pump 2	For Gas back flow		<input type="text" value="--"/>	Approved	 
Pump 3	For wash water		<input type="text" value="--"/>	Waiting	 
Pump 4	For wash water		<input type="text" value="--"/>	Rejected	 

Tank Name	Chemical Name	Facility Name	Pump Name	Action
O941 A/B	Demulsifier	<input checked="" type="checkbox"/> 27	Pump 1	
O946	Methanol	<input checked="" type="checkbox"/> 28	Pump 2	
O944 A	Biocide A	<input checked="" type="checkbox"/> 17	Pump 3	
O944 B	Biocide B	<input checked="" type="checkbox"/> 17	Pump 4	

Mapping


Tank – Chemical 1:1

Tank - Facility 1:1

Tank – Pump M:M

**Fig-** Design for Popup inside that opens up on button click of Pump Curve button from Pump Grid

Facility: 
Pump Name: 
Status:

Stroke Length (cm)	Stroke Volume(Gallon)
100	1000
90	900
 80	850
80	800
60	600
50	500
40	400
20	200

### Chemical Stock:

Chemical Stock Screen is used to record all the entries of the Chemicals into the facility i.e. Received, Dispatched along with volume and time they entered or dispatched.

**Fig-** Design for Chemical Stock Screen.

Entry Type	Facility	Chemical	Date	Remarks	Volume	Actions
Receipt	CR-7	Methanol	12-Jul-17	.....	6	Edit
Dispatch	SR-4	Biotin	12-Jul-17	.....	4	Edit
Receipt	GB-11	Methanol	12-Jul-17	.....	6	Edit
Dispatch	M-12	Oxygen	12-Jul-17	.....	7	Edit

## Development Outcome-

### Configuration Screen-

#### Facility Tab-

Facility Name	Description	Remarks	Is Active	Actions
1271 11 N2SSS	Demo 1271 ccc 20Demo 1271 ccc 20Demo 1271 ccc 20Demo 1271 ccc 20Demo 1271 ccc 20Demo 1271 ccc 20	test 16 today v	<input checked="" type="checkbox"/>	
28	This is of 28	test	<input checked="" type="checkbox"/>	
30	new test	sample	<input checked="" type="checkbox"/>	
111	today test	test	<input checked="" type="checkbox"/>	
128	testt	testt	<input checked="" type="checkbox"/>	
100	adding	adding	<input type="checkbox"/>	
1001	addinggg	addinggg	<input checked="" type="checkbox"/>	
1002	adding	adding	<input checked="" type="checkbox"/>	
TODAY16	test	test	<input type="checkbox"/>	
GC1	test	testtest	<input type="checkbox"/>	

#### Functionalities-

- Columns- Facility Name, Description, Remarks, Is Active, Actions.
- All the columns are editable by clicking button in Actions column.
- New Records can be added by clicking Add new record at the top.
- All these changes will be reflected in DB.
- Page is responsive for any window size.
- Page contains 10 rows as default.
- Grid is sortable, filterable and pageable.
- Facility Name-
  - Facility Name can't be duplicated and nullable.
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept special characters except '-' or '\_'
  - Doesn't accept more than 100 characters.
- Description-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 400 characters.
- Remarks-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 500 characters.
- Is Active accepts either true or false.

## Chemical Tab-

Chemical Consumption

Tank Details

Chemical Inventory

Chemical Calculation

LIMS Portal

Chemical Stock

Configuration

Dashboard

Flow Rate

Pump Curve Approval

>

CI Dashboard > Configuration

Facility

Chemical

Tank

Pump

Mapping

+ Add new record

Chemical Name	Description	Remarks	Actions
testing error custom msg	M Sample	test	
Biotin	B Sample	Sample test	
Oxygen	oxygendata	test	
methanol update	test test test	testtesttest	
NewChemical	test data	Sample	
Carbon	Carbon sample	test update	
testing new record in chemical	testing new record in chemical	testing new record in chemical	
101010			
testing entry for chemical name	testing entry for chemical name		
GS30GS30			

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Items per page

## Functionalities-

- Columns- Chemical Name, Description, Remarks, Actions.
- All the columns are editable by clicking button in Actions column.
- New Records can be added by clicking Add new record at the top.
- All these changes will be reflected in DB.
- Page is responsive for any window size.
- Page contains 10 rows as default.
- Grid is sortable, filterable and pageable.
- Chemical Name-
  - Chemical Name can't be duplicated and nullable.
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept special characters except '-' or '\_'
  - Doesn't accept more than 100 characters.
- Description-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 400 characters.
- Remarks-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 500 characters.

## Tank Tab-

Chemical Consumption ▾ Tank Details Chemical Inventory Chemical Calculation LIMS Portal Chemical Stock Configuration Dashboard Flow Rate Pump Curve Approval						
CI Dashboard > Configuration						
Facility Chemical Tank Pump Mapping						
+ Add new record						
Tank Name	Description	Remarks	Tank Factor	Tank Factor Tag Name	Tag	Actions
Tank1	for gas back flow	sampletest5	89.32	DataSourceHistorian_001 [Tank1.Level]		
Tank2	for wash water	sampletest	89.32	tank2 data		
Tank3	for crud oil	sampledata	20.15	tank3 data		
Tank4	for wash water	sampledata	13.15	tank4 data		
Tank5	for oil	sampleremarks	18.65	tank5 data		
Tank6	dhudjk	dhudh	36	hdjdj		
Tank7	for testing	sampletestnew	25.36	DataSourceHistorian_001 Tank1Heftagint		
Tank1	bghctm	bdcl	7	hh		
Tank 9	hdang	hgdllq	76	gyf	yds	
Taba	jhatfl	vgflug	79		yl	
<div> <div>10</div> <div>Items per page</div> </div>						

## Functionalities-

- Columns- Tank Name, Description, Remarks, Tank Factor, Tank Factor Tag Name, LIMS Tank Tag, Actions.
- All the columns are editable by clicking button in Actions column.
- New Records can be added by clicking Add new record at the top.
- All these changes will be reflected in DB.
- Page is responsive for any window size.
- Page contains 10 rows as default.
- Grid is sortable, filterable and pageable.
- Tank Name-
  - Tank Name can't be duplicated and nullable.
  - Doesn't accept two spaces together.
  - Doesn't accept space as first character.
  - Doesn't accept special characters except '-' or '\_'
  - Doesn't accept more than 100 characters.
- Description-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 400 characters.
- Tank Factor-
  - Numerical Field.
  - Doesn't accept any character.
  - Doesn't accept any spaces.
  - Doesn't accept value of more than length 10.
- Remarks, Tank Factor Tag Name, LIMS Tank Tag-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 500 characters.

## Pump Tab-

Chemical Consumption	Tank Details	Chemical Inventory	Chemical Calculation	LIMS Portal	Chemical Stock	Configuration	Dashboard	Flow Rate	Pump Curve Approval
CI Dashboard > Configuration									
Facility	Chemical	Tank	Pump	Mapping					
+ Add new record									
Pump Name	Description	Remarks	Pump Curve	Approval Status	Pump Tag	Actions			
pump1	Sampledata1est	testat759		WAITING	pump1 tag				
pump2	Sample1est	testat726		WAITING	pump2 tag				
pump3	testdata	testat730		WAITING	pump3 tag				
pump4	testdataat728	testat728		WAITING	pump4 tag				
pump5	testdataat735	testat735		WAITING	pump5 tag				
pump6	dsahrdj	sfa1d1fas		APPROVED	bdaj_cf				
pump6	hsasjfla	bnfag1hflaj		WAITING	tsdaf				
Pump7	dhsagl	dbasi		WAITING	hcalh				
Pump7	hdhsaglt	dgsathg		APPROVED	gcsaj				
Pump7	fjksaskj	djkskhj		APPROVED	ujhsdk				
<div> <div>1 2 3</div> <div>10 items per page</div> </div>									

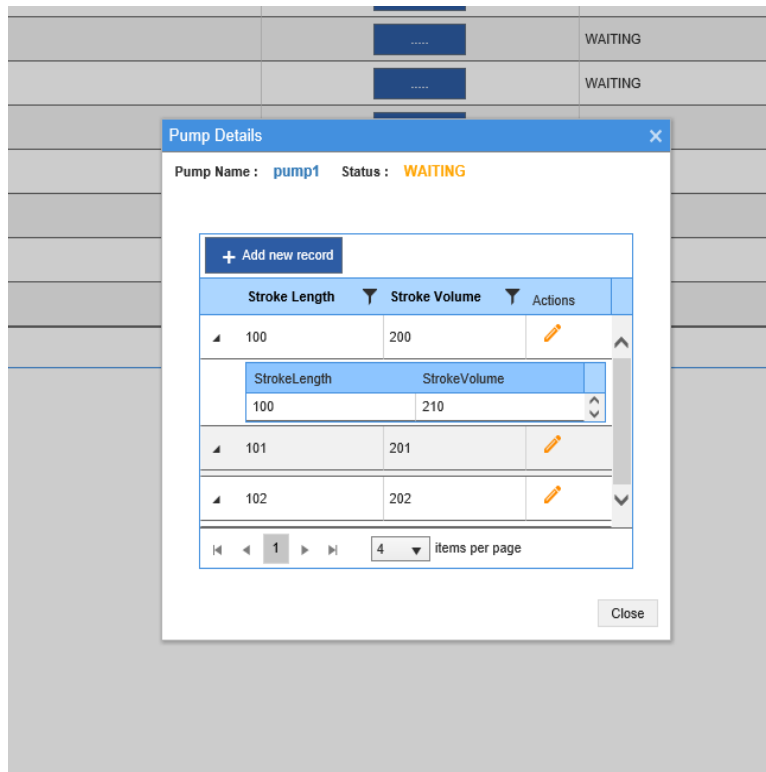
## Functionalities-

- Columns- Pump Name, Description, Remarks, Pump Curve, Approval Status, Pump Tag, Actions.
- All the columns except Approval Status are editable by clicking button in Actions column.
- New Records can be added by clicking Add new record at the top.
- Newly entered records get status APPROVED automatically from DB.
- Button in Pump Curve column is disabled till the newly entered row gets APPROVED status.
- On-click the Pump Curve button opens a pop-up with another grid.
- The row will not be editable if it is in WAITING state.
- All these changes will be reflected in DB.
- Page is responsive for any window size.
- Page contains 10 rows as default.
- Grid is sortable, filterable and pageable.
- Pump Name-
  - Pump Name can't be duplicated.
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept special characters except '-' or '\_'
  - Doesn't accept more than 100 characters.
  - This field is not nullable.
- Description-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 400 characters.
- Remarks, Pump Tag-
  - Pump Tag can't be duplicated and nullable.



- Doesn't accept space as first character.
- Doesn't accept two spaces together.
- Doesn't accept more than 500 characters.

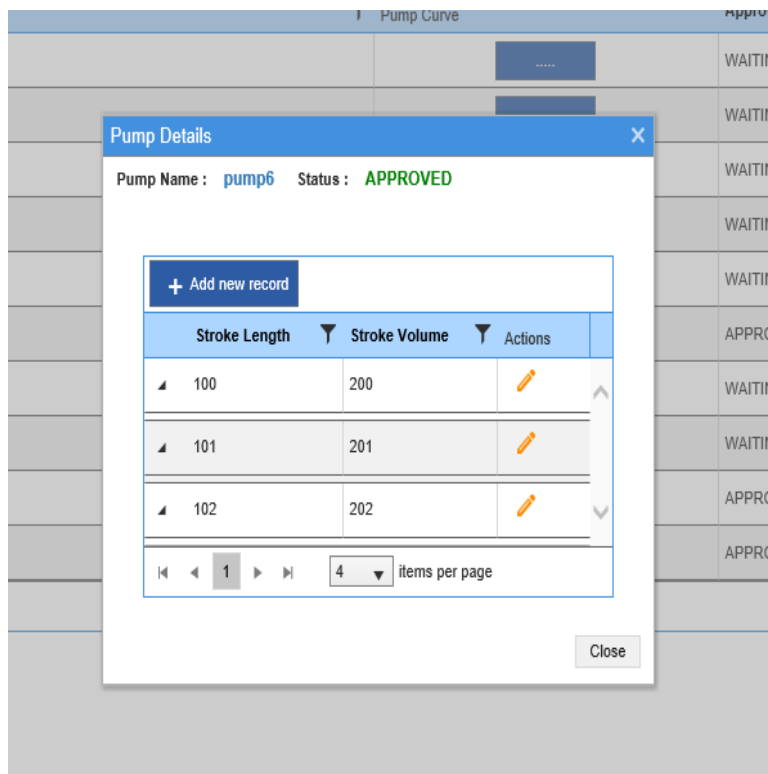
### Pump Curve Pop-Up-



### Functionalities-

- Columns- Stroke Length & Stroke Volume.
- Both the columns are editable by clicking button in Actions column.
- Edited rows we convert into child row of the edited parent as shown in the figure.
- New Records can be added by clicking Add new record at the top.
- All these changes will be reflected in DB.
- Either after adding or editing a row, the status of its concerned pump goes to WAITING state.
- Once a pump goes to WAITING state, no row in its Pump Curve can be edited or created.
- Newly created Pump's Pump Curve gets 3 items with some Stroke length and Stroke Volume values as default.
- Button in Pump Curve column is disabled till the newly entered row of pump gets APPROVED status.
- On-click the Pump Curve button opens a pop-up with another grid.
- Page is responsive for any window size.
- Page contains 4 rows as default.
- Grid is sortable, filterable and pageable.

**Fig-**One more Screen shot of Pump Curve when status is in APPROVED state.



- Stroke Length
  - Numerical Field.
  - Doesn't accept any character.
  - Doesn't accept any spaces.
  - Doesn't accept value of more than length 10.
  - This field can't be duplicated.
- Stroke Volume
  - Numerical Field.
  - Doesn't accept any character.
  - Doesn't accept any spaces.
  - Doesn't accept value of more than length 10.
- Status is shown in Green color if it is APPROVED.
- Status is shown in Red color if it is REJECTED.
- Status is shown in Orange color if it is WAITING.

## Chemical Stock-

Chemical Consumption

Tank Details

Chemical Inventory

Chemical Calculation

LIMS Portal

Chemical Stock

Configuration

Dashboard

Flow Rate

Pump Curve Approval

>

CI Dashboard > Chemical Stocks

+ Add new record

Entry Type	Chemical Name	Facility Name	Date - Time	Remarks	Volume	Actions
Receipt	Oxygen	128	2017-07-06T10:53:00		1	
Dispatch	Biotin	30	2017-07-06T11:37:00	dfs	3	
Receipt	Biotin	30	2017-07-06T17:58:00	fs	3	
Dispatch	Oxygen	18	2017-07-06T18:54:32.887	fgd	5	
Dispatch	Biotin	30	2017-07-06T19:17:43.747	f	34	
Dispatch	Biotin	111	2017-07-06T18:30:00	fd	5	
Receipt	Biotin		2017-07-06T18:30:00	fdn	4	
Receipt	Oxygen	128	2017-07-06T12:14:51.03	faushff	3	
Dispatch	Oxygen	128	2017-07-06T12:14:51.03	faf	1	
Dispatch	NewChemical	111	2017-07-06T12:25:28.983	fdan	3	

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items per page

## Functionalities-

- Columns- Entry Type, Chemical Name, Facility Name, Date-Time, Remarks, Volume, Actions.
- All the columns are editable by clicking button in Actions column.
- New Records can be added by clicking Add new record at the top.
- All these changes will be reflected in DB.
- Page is responsive for any window size.
- Page contains 10 rows as default.
- Grid is sortable, filterable and pageable.
- Entry Type-
  - It has a combo-box inside.
  - Two options will be available – Dispatch & Receipt
  - User should select either of them as it can't be nullable.
- Chemical Name-
  - It has a combo-box inside.
  - Options will be coming from data base and they're dynamic in nature.
  - User should select one of them as it can't be nullable.
- Facility Name-
  - It has a combo-box inside.
  - Options will be coming from data base and they're dynamic in nature.
  - User can select one of them or leave it un-selected.
- Date-Time-
  - It has a Date-Time Picker embedded inside.
  - User will be able to select only yesterday's or today's date
  - On clicking edit button in Actions field, current date is shown in the column field by default

- User will not be able to select future time of today also.
- Remarks-
  - Doesn't accept space as first character.
  - Doesn't accept two spaces together.
  - Doesn't accept more than 500 characters.
- Volume-
  - Numerical Field.
  - Doesn't accept any character.
  - Doesn't accept any spaces.
  - Doesn't accept value of more than length 10.

## 5 SCHEDULE (WEEK PLAN)

This table details as to how the 8 weeks progressed for me and what are the different works I did, contributing to the project.

May 15- May 22	Learning Kendo UI, working with Visual Studio.
May 22- May 29	Started developing web screens with HTML and Plain JS. Started going through Code- first Entity Frame Work & Angular-JS
May 30-June 8	Developed 2 demo screens using current code conventions with Html and Angular JS.
June 10- June 20	Developed Pump Tab of Configuration screen.
June 21- June 28	Developed Chemical Stock Screen & worked with Flow Rate Screen.
July 1- July 7	Preparing test cases, executing them and debugging the errors and making some minor changes in UI.

## **6 LEARNING FROM THE INTERNSHIP PROGRAM**

The Internship program was quite beneficial for me. It helped me in improving my various technical skills and enhanced my knowledge in new areas.

- I gained new knowledge in understanding and working with Kendo UI, Microsoft Visual Studio and Sql Manager.
- I also started learning and working with Angular-JS
- I have got introduced to build an application using Code-first process and learnt a few things about Code-First Entity Frame Work.
- I was working on a live project for the first time and I got introduced to this important area of client meetings and agile methodology employed in completing project.

### **Work Experience**

My internship was excellent in terms of work environment. The team I worked with was very friendly and helped me a lot in all my problems. New experiences include

- Teamwork

In this project 9-10 people worked together thus providing enough opportunity for proper teamwork and coordination. This was a good experience for me as the team was very cooperative and understanding.

- Responsibility and keeping commitments

The importance of honoring commitments and time of others was an important thing, which I learnt as a Summer Intern. Especially, while working as a team it is very important to keep these points in mind.