**Design Document**

**TEAM 2 (Mavericks)**

**CRM (Customer Relationship Manager)**

Design Document

By

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1. **INTRODUCTION**
   1. **Purpose**

This Design Document describes the architecture and specifications for the application that is being built based on the CRM functionality.

* 1. **Scope**

The goal of this project is to understand and build on the AWS cloud and host applications on the cloud with the needed usability and settings required for best performance of a web application. This project is intended to understand the working and configuration of an application on the cloud.

**1.3. Definitions and Acronyms**

1. AWS – Amazon Web Services

2. JSP- Java server Pages

3. HTML – Hyper Text mark-up Language

4. CRM- Customer relationship manager

5. SSH- Secure Shell

6. JDBC – Java Database connectivity

7. json – java script object notation

**1.4. We will have the following functionalities:**

1. Login

2. Logout

3. User management

4. Accounts management

5. Contacts Management

6. Leads Management

7. Opportunity Management

8. Sales Users and Administrator Management

9. Products

**1.5. Languages Used in the project:**

1. Front end development (HTML, CSS and JavaScript)

2. Database (MySQL and DynamoDB)

3. Back end development (PHP)

**1.6. Tools Being Used**

1. IntelliJ

2. SQL Management Studio/SQL Server

3. DynamoDB

4. STS

5. AWS For hosting

6. PHPUnit for unit test cases

* 1. . **Authentication/Login Test Cases**

**Functionality**

1. Does the login form work successfully?

2. Does the logout link redirect back to the login screen?

3. Forgot password link should navigate to the forgot password page

4. Click on back button on the browser, does that work as expected?

5. How are errors handled and displayed?

**Security**

1. Hashing of password field?

2. Does the password decipher after being copied?

3. Copy and paste the password?

4. Is there any minimum password length?

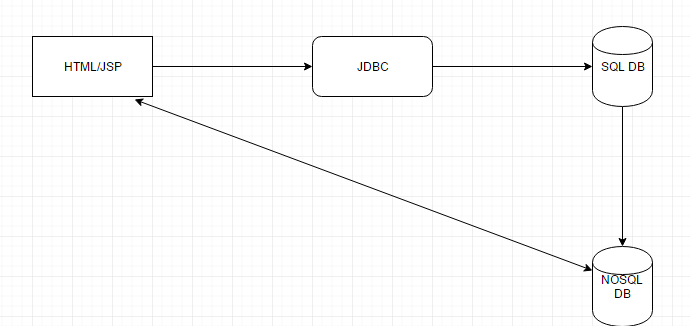
5. Is the form giving away security information if the source is viewed/Inspect element?

6. URL Manipulation?

7. Multiple windows of the same account/multiple logins of the same account?

8. Cookies allowed?

**Architecture Diagram**

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**IAM Alias**

[**https://neu-csye6225-spring2017-team-2.signin.aws.amazon.com/console**](https://neu-csye6225-spring2017-team-2.signin.aws.amazon.com/console)

**Shell Script**

**Create Instance**

aws ec2 run-instances --image-id ami-5ac2cd4d --count 1 --instance-type t2.micro --subnet-id subnet-db46c9e7 --associate-public-ip-address --enable-api-termination

**Root Volume and Type**

aws ec2 run-instances --image-id ami-5ac2cd4d --block-device-mappings '[{"DeviceName":"/dev/sdb","Ebs":{"VolumeSize":10,"DeleteOnTermination":true,"VolumeType":"standard"}}]'

**Database Queries**

**Query 1:**

CREATE TABLE `contact` (

`contactId` int(10) unsigned NOT NULL AUTO\_INCREMENT,

`ContactFirstName` varchar(45) DEFAULT NULL,

`ContactLastName` varchar(45) DEFAULT NULL,

`AccountID` int(11) DEFAULT NULL,

`Account Name` varchar(45) DEFAULT NULL,

`EmailID` varchar(100) DEFAULT NULL,

`Status` varchar(45) DEFAULT NULL,

PRIMARY KEY (`contactId`),

UNIQUE KEY `contactId\_UNIQUE` (`contactId`)

) ENGINE=InnoDB AUTO\_INCREMENT=10012 DEFAULT CHARSET=utf8;

**Query 2:**

CREATE TABLE `account` (

`AccountID` int(10) unsigned NOT NULL AUTO\_INCREMENT,

`AccountName` varchar(45) DEFAULT NULL,

`AccountDescription` varchar(100) DEFAULT NULL,

PRIMARY KEY (`AccountID`),

UNIQUE KEY `AccountID\_UNIQUE` (`AccountID`)

) ENGINE=InnoDB AUTO\_INCREMENT=1011 DEFAULT CHARSET=utf8;

**Query 3:**

CREATE TABLE `product` (

`ProductId` int(10) unsigned NOT NULL AUTO\_INCREMENT,

`ProductName` varchar(45) NOT NULL,

`Description` longtext,

`Cost` int(11) DEFAULT NULL,

PRIMARY KEY (`ProductId`),

UNIQUE KEY `ProductId\_UNIQUE` (`ProductId`)

**Query 4:**

CREATE TABLE `opportunities` (

`OpportinityID` int(10) unsigned NOT NULL AUTO\_INCREMENT,

`OpportunityName` varchar(45) DEFAULT NULL,

`AccountID` int(10) unsigned DEFAULT NULL,

`LeadID` int(11) unsigned DEFAULT NULL,

PRIMARY KEY (`OpportinityID`),

UNIQUE KEY `OpportinityID\_UNIQUE` (`OpportinityID`),

KEY `leadidfk\_idx` (`LeadID`),

KEY `acctidfk\_idx` (`AccountID`),

CONSTRAINT `acctidfk` FOREIGN KEY (`AccountID`) REFERENCES `account` (`AccountID`) ON DELETE NO ACTION ON UPDATE NO ACTION,

CONSTRAINT `leadidfk` FOREIGN KEY (`LeadID`) REFERENCES `leads` (`LeadID`) ON DELETE NO ACTION ON UPDATE NO ACTION

) ENGINE=InnoDB AUTO\_INCREMENT=10004 DEFAULT CHARSET=utf8;

**Query 5:**

CREATE TABLE `leads` (

`LeadID` int(11) unsigned NOT NULL AUTO\_INCREMENT,

`LeadFirstName` varchar(45) NOT NULL,

`LeadLastName` varchar(45) NOT NULL,

`AccountID` int(10) unsigned DEFAULT NULL,

`ProductID` int(10) unsigned DEFAULT NULL,

`Status` varchar(45) DEFAULT NULL,

`Phonenumber` varchar(20) DEFAULT NULL,

`Lead\_opportunity` varchar(45) NOT NULL,

PRIMARY KEY (`LeadID`),

UNIQUE KEY `idLeads\_UNIQUE` (`LeadID`),

KEY `acctidfk\_idx` (`AccountID`),

KEY `prodidfk\_idx` (`ProductID`)

) ENGINE=InnoDB AUTO\_INCREMENT=10011 DEFAULT CHARSET=utf8;

**Tables**

**Account**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Type | Null | Key | Default | Extra |
| AccountID | int(10) unsigned | NO | PRI |  | auto\_increment |
| AccountName | varchar(45) | YES |  |  |  |
| AccountDescription | varchar(100) | YES |  |  |  |

**Contact**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Type | Null | Key | Default | Extra |
| contactId | int(10) unsigned | NO | PRI |  | auto\_increment |
| ContactFirstName | varchar(45) | YES |  |  |  |
| ContactLastName | varchar(45) | YES |  |  |  |
| AccountID | int(11) | YES |  |  |  |
| EmailID | int(11) | YES | UNI |  |  |
| Status | varchar(45) | YES |  |  |  |

**Lead**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LeadID | int(11) unsigned | NO | PRI |  | auto\_increment |
| LeadFirstName | varchar(45) | NO |  |  |  |
| LeadLastName | varchar(45) | NO |  |  |  |
| AccountName | varchar(45) | YES |  |  |  |
| Product | varchar(45) | YES |  |  |  |
| Status | varchar(45) | YES |  |  |  |
| Phonenumber | varchar(20) | YES |  |  |  |
| Lead\_opportunity | varchar(45) | NO |  |  |  |

**Product**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ProductId | int(10) unsigned | NO | PRI |  | auto\_increment |
| ProductName | varchar(45) | NO |  |  |  |
| Description | blob | YES |  |  |  |
| Cost | int(11) | YES |  |  |  |

**Users**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| UserId | int(10) unsigned | NO | PRI |  | auto\_increment |
| FirstName | varchar(45) | NO |  |  |  |
| LastName | varchar(45) | NO |  |  |  |
| Roll | varchar(45) | NO |  |  |  |
| PhoneNo | varchar(45) | YES |  |  |  |
| Street | varchar(45) | YES |  |  |  |
| City | varchar(45) | YES |  |  |  |
| State | varchar(45) | YES |  |  |  |
| zip | int(11) | YES |  |  |  |
| Region | varchar(45) | YES |  |  |  |