SE 3309
Database Management Systems
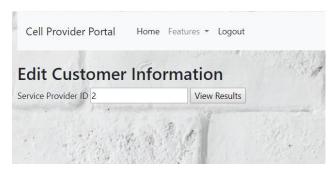# Assignment 4: CellProvider

24 November 2018

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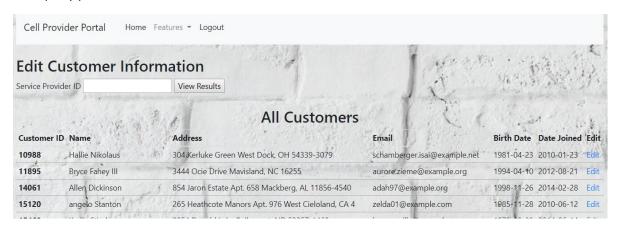
Jotham d'Ailly – 250 887 949

Nick White – 250 845 539
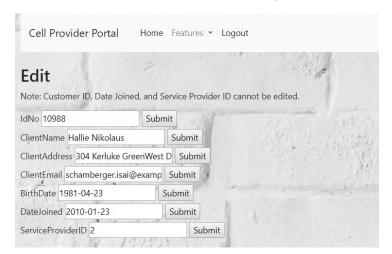
Query 1: Edit Customer Info
Valid Service Provider IDs are integers 1 through 7.

This query produces a relation with customer information for all customers with Service Provider 2:

When the edit button is clicked for each respective name, another form is presented:

If a user attempts to change the ID number, join date, or service provider ID, the changes will not be made. A successful data modification to change the customer name can be seen below.

Hallie Nikolas successfully updated.

Edit

Note: Customer ID, Date Joined, and Service Provider ID cannot be edited.

IdNo 10988 Submit

ClientName Hallie Nikolas Submit

ClientAddress 304 Kerluke GreenWest D Submit

ClientEmail schamberger.isai@examp Submit

BirthDate 1981-04-23 Submit

DateJoined 2010-01-23 Submit

ServiceProviderID 2 Submit

Query 2: View Customers

Service Provider constraints will remain the same for every query (integers 1 through 7). This query produces a relation including all customers for a given service provider.

Cell Provider Portal   Home   Features ▾   Logout

Customers

Service Provider ID 5   View Results

All Customers

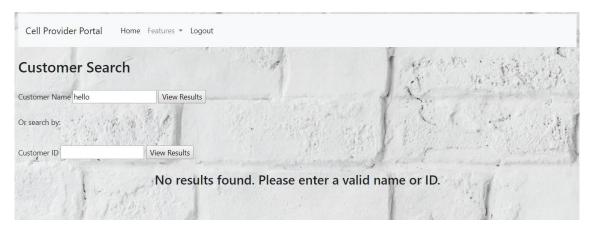| Customer ID	Name	Address	Email	Birth Date	Date Joined
10167	Maye Thiel	7397 Eichmann Heights Maxieport, CA 70343-1153	zkessler@example.net	1970-03-04	2011-03-29
10288	Milan Bayer	67064 Zulauf Key Port Ciceroborough, CT 00587-0985	coleman.bashirian@example.com	1977-07-02	2018-07-22
10366	Prof. Providenci Abbott DDS	58803 Alf Via Americahaven, TN 88904-9705	jaylen.nienow@example.net	1980-10-18	2009-03-21
10554	Blanche Douglas	1857 VonRueden Freeway Connellborough, IA 32834	fzboncak@example.net	1993-09-07	2012-03-02
10645	Savion Tillman	9034 Evert Center South Joannieton, WA 73279-0001	lue94@example.org	1991-01-21	2015-08-19
11391	Mr. Fred Schulist III	5983 Dawson Trace Port Mayra, TN 07443-8808	hammes.jeanette@example.net	1990-09-29	2017-12-04

Query 3: Customer Search

A customer can be searched by their name or ID number. If an incorrect name or ID number are inputted, the user is informed.

Cell Provider Portal   Home   Features ▾   Logout

Customer Search

Customer Name hello   View Results

Or search by:

Customer ID _____   View Results

No results found. Please enter a valid name or ID.

Name search:

Customer Search

Customer Name Tyrel Stark   View Results

Or search by:

Customer ID _____   View Results

Results

Customer ID	Name	Address	Email	Birth Date	Date Joined	Service Provider ID
99748	Tyrel Stark	2550 Blick Brook West Madalinefurt, VT 79191	ebernier@example.org	1980-04-06	2015-02-16	7

ID search:

Customer Search

Customer Name [   ] [View Results]

Or search by:

Customer ID [50293] [View Results]

Results

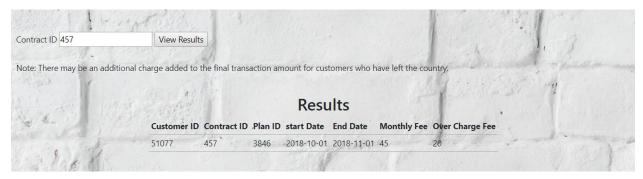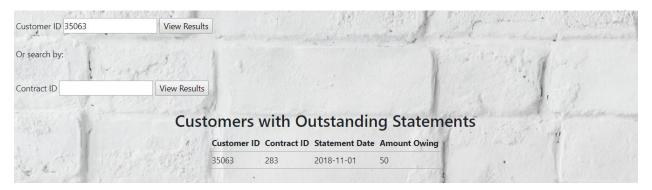| Customer ID	Name	Address	Email	Birth Date	Date Joined	Service Provider ID
50293	Elinore Olson	752 Langosh Freeway Suite 183 West Lavon, CO 14987	mmayert@example.net	1999-01-12	2009-07-25	1!

Query 4: View Statements

The user has the option to view all statements for a service provider, to search for one statement by a customer ID, or to search for a statement by a contract ID. The same validity constraints exist for service provider ID and customer ID as in the previous queries. Below is an example of searching for a statement by contract ID.

Contract ID [457] [View Results]

Note: There may be an additional charge added to the final transaction amount for customers who have left the country.

Results

Customer ID	Contract ID	Plan ID	start Date	End Date	Monthly Fee	Over Charge Fee
51077	457	3846	2018-10-01	2018-11-01	45	20

Query 5: Unpaid Statements

Once again, unpaid statements can be search by provider ID, customer ID, or contract ID. The same validity constraints are in place. An example of searching by customer ID is shown below.

Customer ID [35063] [View Results]

Or search by:

Contract ID [   ] [View Results]

Customers with Outstanding Statements

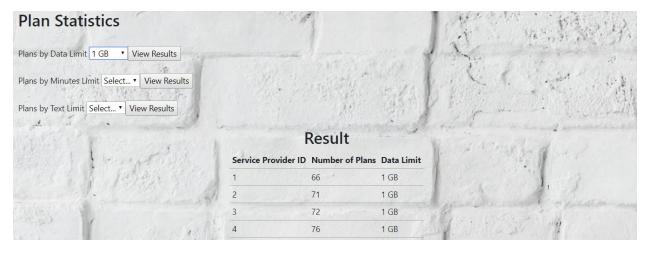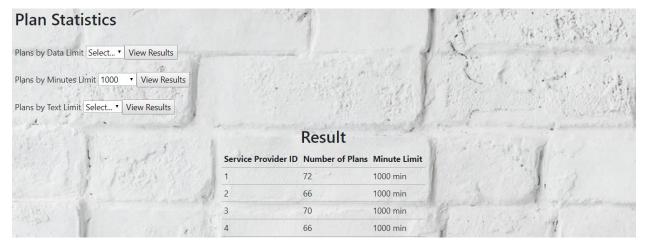| Customer ID	Contract ID	Statement Date	Amount Owing
35063	283	2018-11-01	50

Query 6: View Plans

Plans can be searched for and viewed in the same fashion as the two proceeding queries. Below is the resulting relation for all plans for service provider 6.
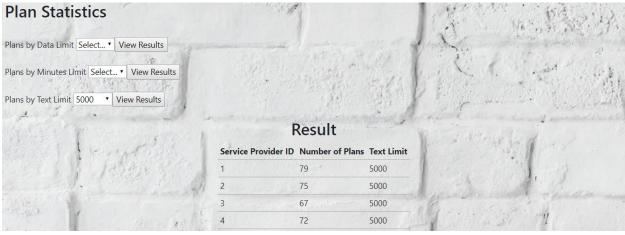
Result

Service Provider ID	Customer ID	Contract ID	Plan ID	Text Limit	Minutes Limit	Data Limit
6	10227	3	1004	10000	1000	5 GB
6	10761	15	1079	1000	100	1 GB
6	11449	21	1128	1000	100	1 GB
6	11837	24	1137	10000	1000	5 GB
6	11917	26	1158	1000	100	1 GB
6	11925	27	1174	1000	100	1 GB
6	12014	30	1195	10000	1000	5 GB
6	12074	31	1208	5000	500	3 GB

Query 7: Plan Statistics

Plan statistics can be viewed across all service providers. The resulting relation shows the number of plans with each service provider and are organized by the limit on texts, minutes, or data.

Plan Statistics

Plans by Data Limit [1 GB ▾] [View Results]

Plans by Minutes Limit [Select... ▾] [View Results]

Plans by Text Limit [Select... ▾] [View Results]

Result

Service Provider ID	Number of Plans	Data Limit
1	66	1 GB
2	71	1 GB
3	72	1 GB
4	76	1 GB

Plan Statistics

Plans by Data Limit Select... ▾ View Results

Plans by Minutes Limit 1000 ▾ View Results

Plans by Text Limit Select... ▾ View Results

Result

Service Provider ID	Number of Plans	Minute Limit
1	72	1000 min
2	66	1000 min
3	70	1000 min
4	66	1000 min

Plan Statistics

Plans by Data Limit Select... ▾ View Results

Plans by Minutes Limit Select... ▾ View Results

Plans by Text Limit 5000 ▾ View Results

Result

Service Provider ID	Number of Plans	Text Limit
1	79	5000
2	75	5000
3	67	5000
4	72	5000

Query 8: Transactions

Transactions can be searched in the same manner as the previous three queries.

View Transactions

Service Provider ID [   ] View Results

Or search by:

Customer ID [   ] View Results

Or search by:

Transaction Number [   ] View Results

Result

Service Provider ID	Customer ID	Transaction Number	Transaction Date	Transaction Amount
4	13611	45	2018-10-24	$65

Query 9: Customers Out of the Country

This query allows the user to search customers who are currently out of the country. It does not include customers who were out of the country at a different time in the month. The user can either view everyone out of the country, or they can view everyone who has been out of the country for a set number of days, as can be seen below.

Customers Out of the Country

Service Provider ID [   ] View Results

Or search by:

Number of days out of the country [2   ] View Results

Results

Customer ID	Name	Phone Number	Days out of Country
10034	Miss Beth Laken	1-667-204-44	2
10167	Maye Thiel	05497585022	2
10346	Dr. Myrtle Kerluke V	1-033-869-91	2
10366	Prof. Providenci Abbott DDS	1-101-235-27	2
10534	Dr. Newell Kuhic V	+44(3)043276	2

Query 10: Current Usage

This query produces a relation in which a customer's current usage of minutes, texts, and data are compared to their monthly limit. Some people, like Rosemary, are better at staying within in their limits than people like Jeanne.

Monthly Usage

Customer ID [   ] View Results

Results

Customer ID	Name	Current Texts	Text Limit	Current Minutes	Minutes Limit	Data Usage	Data Limit
13850	Miss Rosemary Nicolas DVM	3556	5000	302	500	1.43 GB	3 GB

Monthly Usage

Customer ID [   ] View Results

Results

Customer ID	Name	Current Texts	Text Limit	Current Minutes	Minutes Limit	Data Usage	Data Limit
21852	Jeanne Stamm	8590	5000	868	500	5.8 GB	3 GB

Query 11: Expiring Contracts

There are two parts to this feature. The first query shows all contracts expiring in less than four months for a given service provider.

Customer Contracts Expiring in Less than 4 Months

Service Provider ID 3   [View Results]

Or check when a contract will expire:

Customer ID [   ]   [View Results]

Contract Expiration Date

Customer ID	Name	Email	Contract Length	Contract ID
10034	Miss Beth Laken	haley.melvina@example.net	2 months	1001
13070	Keshaun Huel V	keenan.thiel@example.net	2 months	1043
17627	Prof. Opal Runolfsdottir	stroman.diamond@example.org	1 months	104
20342	Darryl Hahn	walter.arnold@example.com	2 months	129

The second query allows a customer's contract(s) to be searched, regardless of when their contract expires.

Contract Expiration Date

Customer ID	Name	Email	Contract Length	Contract ID
99779	Justen Kassulke	keven13@example.org	3 months	998

Queries in Code

Following are some of the queries used to generate the relations for the functionalities in this website.

```php
$sql = "SELECT cu.idNo, clientName, clientEmail, contractLength, contractID
        FROM c9.Customer cu, c9.Contract co
        WHERE contractLength < 4
        AND cu.idNo = co.idNo
        AND serviceProviderID = :spID";
```

```php
$sql = "USE c9";
$sql = "INSERT INTO Customer VALUES (?, ?, ?, ?, ?, ?, ?)";
$stmt = mysqli_prepare($mysqli, $sql);
$stmt->bind_param("isssssi", $_POST['idNo'], $_POST['name'], $_POST['address'], $_POST['email'], $_POST['bday'], $_POST['jDate'], $_POST['spID']);
$stmt->execute();
```

```php
$sql = "SELECT c.idNo, clientName, currTxt, textAmount, currMin, minAmount, currData, dataAmount
        FROM c9.Customer c, c9.Phone p, c9.Contract co, c9.Statement s, c9.Plan pl
        WHERE c.idNo = :idNo
        AND c.idNo = p.idNo
        AND c.idNo = co.idNo
        AND co.contractID = s.contractID
        AND s.planID = pl.planID
        GROUP BY c.idNo;";
```

```php
$sql = "SELECT c.idNo, clientName, phoneNo, daysOut
        FROM c9.Customer c
        INNER JOIN c9.Phone p
            ON c.idNo = p.idNo
        WHERE inCntry = 0
        AND daysOut = :daysOut
        GROUP BY c.idNo";
```

```php
$sql = "SELECT cu.idNo, p.planID, textAmount, minAmount, dataAmount, co.contractID, serviceProviderID
        FROM c9.Customer cu, c9.Contract co, c9.Statement s, c9.Plan p
        WHERE cu.idNo = co.idNo
        AND co.contractID = s.contractID
        AND s.planID = p.planID
        AND co.contractID = :contractID
        GROUP BY cu.idNo";
```

```php
$sql = "SELECT cu.idNo, s.contractID, planID, startDate, endDate, monthlyFee, overChargeFee
        FROM c9.Customer cu, c9.Contract co, c9.Statement s
        WHERE s.contractID = :contractID
        AND co.contractID = s.contractID
        AND cu.idNo = co.idNo
        GROUP BY cu.idNo";
```

```php
$selected_val = $_POST['formData'];

$sql = "SELECT serviceProviderID, COUNT(dataAmount) as numPlans, dataAmount
        FROM c9.Customer cu, c9.Contract co, c9.Statement s, c9.Plan p
        WHERE cu.idNo = co.idNo
        AND co.contractID = s.contractID
        AND s.planID = p.planID
        AND dataAmount = $selected_val
        GROUP BY serviceProviderID";
```

```php
$sql = "SELECT cu.idNo, co.contractID, endDate, transAmount
        FROM c9.Customer cu, c9.Contract co, c9.Payment p, c9.Statement s, c9.Transactions t
        WHERE co.contractID = :contractID
        AND cu.idNo = co.idNo
        AND co.idNo = p.idNo
        AND p.paid = 0
        AND p.methodID = t.methodID
        AND co.contractID = s.contractID
        GROUP BY cu.idNo";
```

```php
$customer =[
  "idNo"          => $_POST['idNo'],
  "clientName" => $_POST['clientName'],
  "clientAddress"  => $_POST['clientAddress'],
  "clientEmail"     => $_POST['clientEmail'],
  "birthDate"       => $_POST['birthDate']
];

$sql = "UPDATE c9.Customer
        SET idNo = :idNo,
           clientName = :clientName,
           clientAddress = :clientAddress,
           clientEmail = :clientEmail,
           birthDate = :birthDate
        WHERE idNo = :idNo";
```