Telecomication Billing System

Progress/Final Report

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Date
12/02/2018

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Introduction & Motivation

Sending voice, data,picture or etc from one point to another using electronic media which is called Telecommunication or short term or this telecom. In these days people using phones with Mobile and Land line which can be services by international companies. This massive network provide by governments and telecom operators which can be listed[1]:

1)Verizon

2)Vodafone

3)Airtel

4)TATA

5)Etisalat

6)Qtel

Also list of these telecom operators provide various different services which can be listed as [2]:

1) Voice Call

2) Fax services

3) SMS & MMS

4) Internet connection

5) Data Download and Upload

6) Video Conferences

7) Ip based services examples: VOIP or VPN

Billing Systems:

There is very complex bill chargings scenarious which could not handle by people there fore we need Billing Systems. Which these systems assist collection of recaipt of mpney from customers. These systems are high end reliable long

distance and expensive software. Here is the important features of system:

1) Rating & Billing

2)Payment Processing

3)Credit Control

4)Disputes and adjustments

5)Collections

6)Multilingual & Multiple Currencies

7)Inter-Carier settlements

8)product & Services

9)Discount applications

[3]

Telecommunications literature

1)**Database(db):** A structured set of data held in a computer, especially one that is accessible in various ways. ‘a database covering nine million workers

2)**Network:** A number of interconnected computers, machines, or operations.[4]

3)**IP:**‘a digital media transport system that runs over standard IP networks’
short for Internet Protocol[5]

4)**Source Code:**A text listing of commands to be compiled or assembled into an executable computer program. [6]

5)**Log:** A regular or systematic record of incidents or observations.
‘keep a detailed log of your activities’[7]

6)**Password:**A secret word or phrase that must be used to gain admission to a place. [8]

7)**Port:** A socket in a computer network into which a device can be plugged. [9]

8)**Server:** A computer or computer program which manages access to a centralized resource or service in a network. [10]

9)**Encrypting:**Convert (information or data) into a code, especially to prevent unauthorized access. [11]

10)**VPN:**Virtual private network, an arrangement whereby a secure, apparently private network is achieved using encryption over a public network, typically the Internet.[12]

11**)Telecommunication:**Communication over a distance by cable, telegraph, telephone, or broadcasting. The branch of technology concerned with telecommunication. [13]

12)**SMS:**Short Message (or Messaging) Service, a system that enables mobile phone users to send and receive text messages. [14]

13:**MMS:**Multimedia Messaging Service, a system that enables mobile phones to send and receive colour pictures and sound clips as well as text messages. [15]

14:**Data:**Facts and statistics collected together for reference or analysis. [16]

15)**Fax:**An exact copy of a document made by electronic scanning and transmitted as data by telecommunications links. [17]

16)**VoIP:**The set of rules that makes it possible to use the Internet for telephone or videophone communication.
[18]

17)**Video Conference:**A conference in which participants in different locations are able to communicate with each other in sound and vision.[19]

18)**LOCALHOST:**is the default name describing the local computer address also known as the loopback address. For example, typing:ping localhost would ping the local IP address of 127.0.0.1 (the loopback address). When setting up a web server or software on a web server, 127.0.0.1 is used to point the software to the local machine.
[20]

19)**HTTP :** Application Protokol for distrubed ,coolaborative hypermedia for IS
[21]

20)**Html:**Hypertext Markup Language, a standardized system for tagging text files to achieve font, colour, graphic, and hyperlink effects on World Wide Web pages.
[22]

21)**CSS:** Stands for Cascading Style Sheets whics describes how HTML elements are to be displayed on screen, paper, or in other media
[23]

22)**javascript:**an object-oriented computer programming language commonly used to create interactive effects within web browsers.
[24]

23)**Java: Java i**s a general-purpose computer-**programming**
[25]

24)**ASP.NET:**web development platform provided by Microsoft.

[26]

25)**PL/SQL:PL/SQL** (Procedural Language for SQL) is Oracle Corporation's procedural extension for SQL and the Oracle relational database.

[27]

26)**Information System** (**IS):**Software that helps you organize and analyze data. This makes it possible to answer questions and solve problems relevant to the mission of an organization. [28]

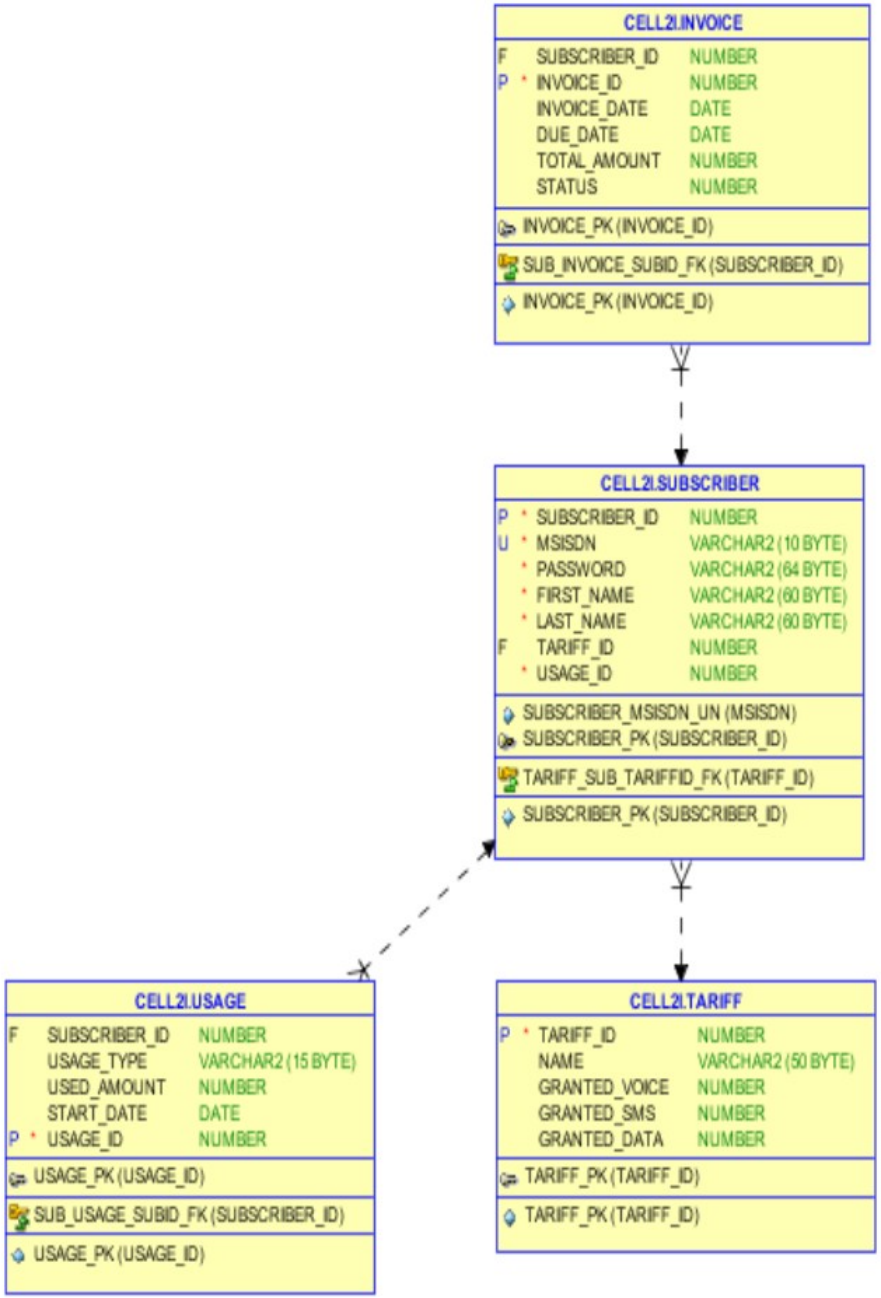
Contents

MOTIVATION

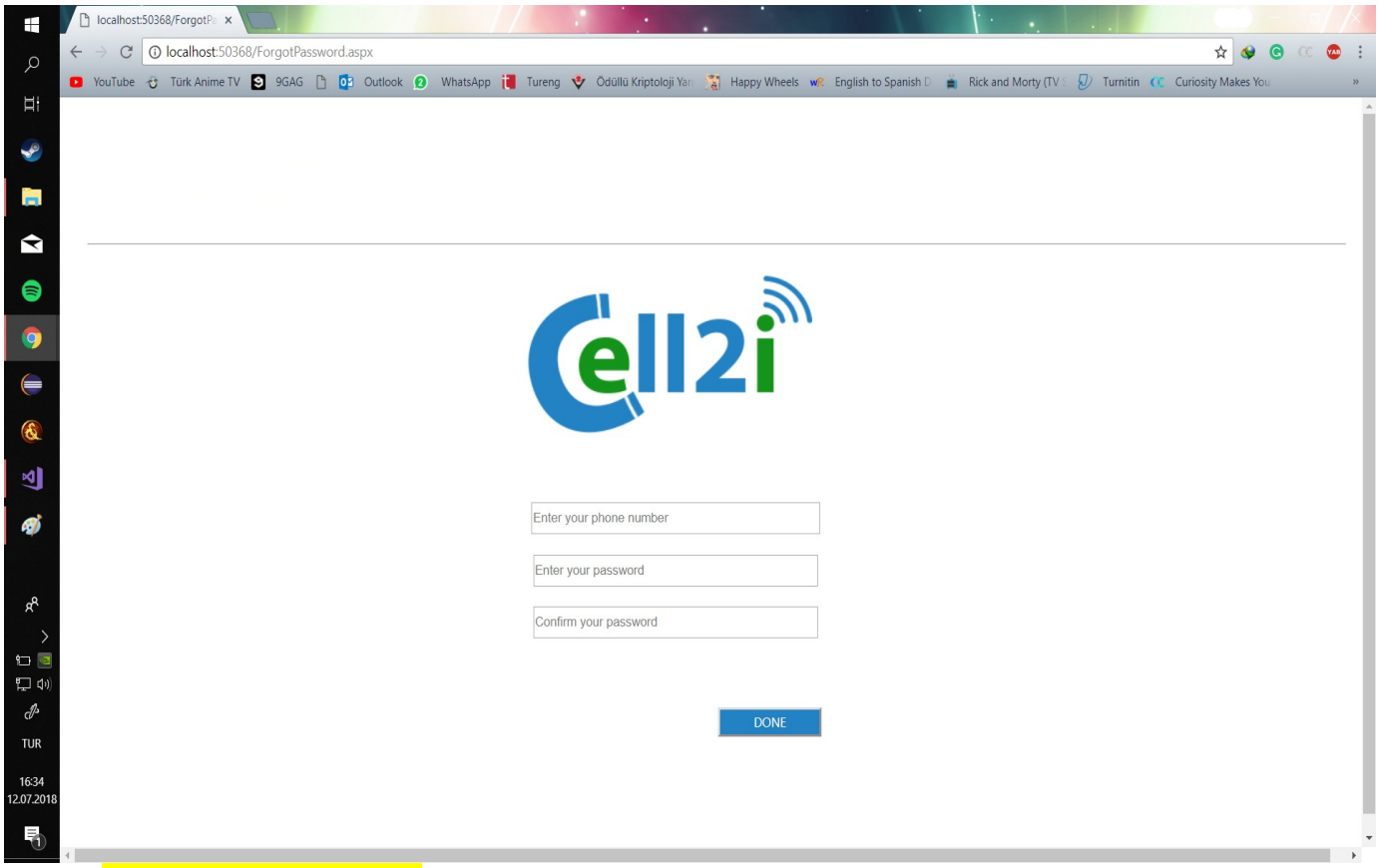
Motivation of this project is prototype of basic billing system with oracle xe,java for web service and asp.net for client side. With this project we want to learn how much is cost for real work application. Therefore it will contains some of mocking technique for expensive software part but in heart of system contains only real work application. Another motivation for this project using divede and conqure to such a big system and built without bug.This project expected to lead understand big and expensive systems with open sourced way.

Objective and Project Actions

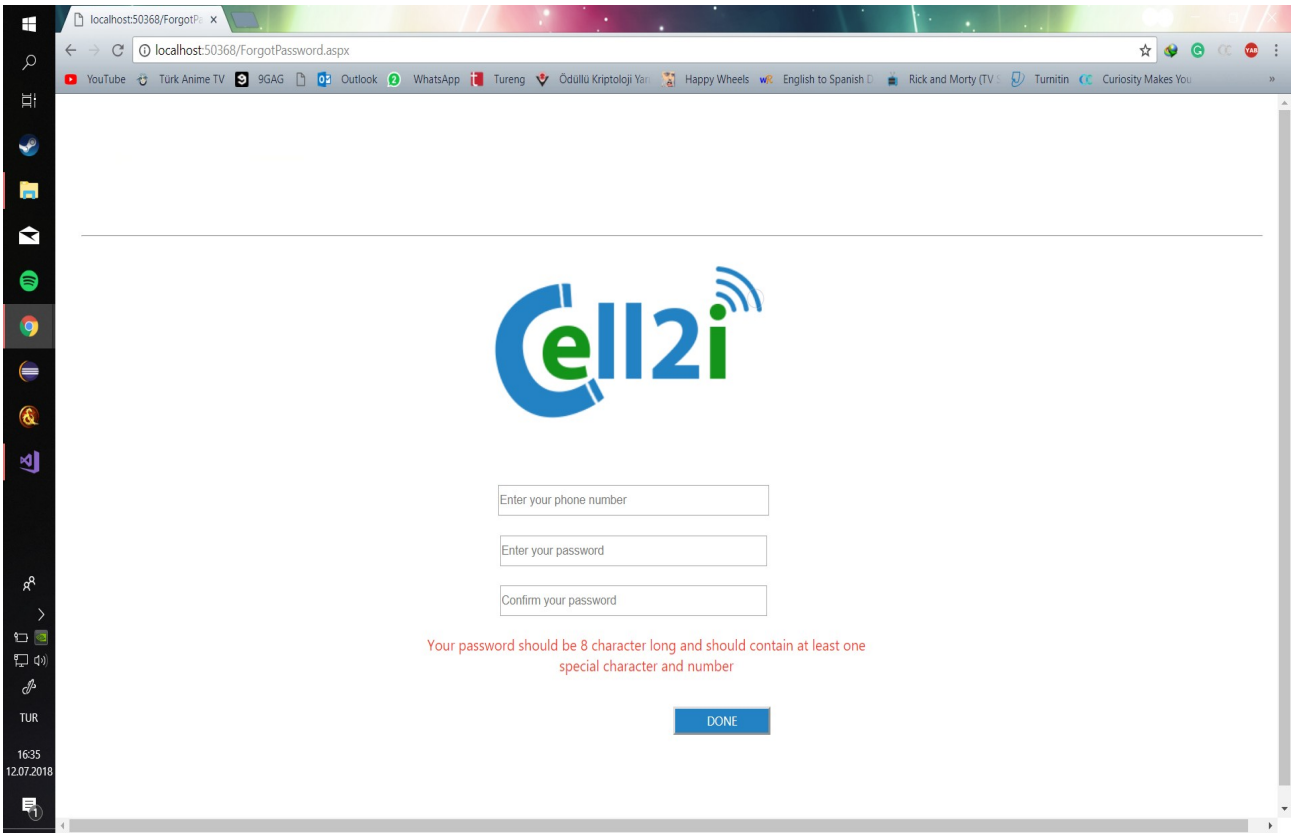
First objective is creating mock up web service to mock up database and it can be provide asp.net developer and database developer to write code in same time. Therefore we will start with webservice and evaluat that system with developers' system requirements. In database perspective, create relational schema is will be first and after we finished it look like this:


CELL2I.INVOICE
F SUBSCRIBER_ID NUMBER
P * INVOICE_ID NUMBER
INVOICE_DATE DATE
DUE_DATE DATE
TOTAL_AMOUNT NUMBER
STATUS NUMBER
INVOICE_PK (INVOICE_ID)
SUB_INVOICE_SUBID_FK (SUBSCRIBER_ID)
INVOICE_PK (INVOICE_ID)
CELL2I.SUBSCRIBER
P * SUBSCRIBER_ID NUMBER
U * MSISDN VARCHAR2 (10 BYTE)
* PASSWORD VARCHAR2 (64 BYTE)
* FIRST_NAME VARCHAR2 (60 BYTE)
* LAST_NAME VARCHAR2 (60 BYTE)
F TARIFF_ID NUMBER
* USAGE_ID NUMBER
SUBSCRIBER_MSISDN_UN (MSISDN)
SUBSCRIBER_PK (SUBSCRIBER_ID)
TARIFF_SUB_TARIFFID_FK (TARIFF_ID)
SUBSCRIBER_PK (SUBSCRIBER_ID)
CELL2I.USAGE
F SUBSCRIBER_ID NUMBER
USAGE_TYPE VARCHAR2 (15 BYTE)
USED_AMOUNT NUMBER
START_DATE DATE
P * USAGE_ID NUMBER
USAGE_PK (USAGE_ID)
SUB_USAGE_SUBID_FK (SUBSCRIBER_ID)
USAGE_PK (USAGE_ID)
CELL2I.TARIFF
P * TARIFF_ID NUMBER
NAME VARCHAR2 (50 BYTE)
GRANTED_VOICE NUMBER
GRANTED_SMS NUMBER
GRANTED_DATA NUMBER
TARIFF_PK (TARIFF_ID)
TARIFF_PK (TARIFF_ID)

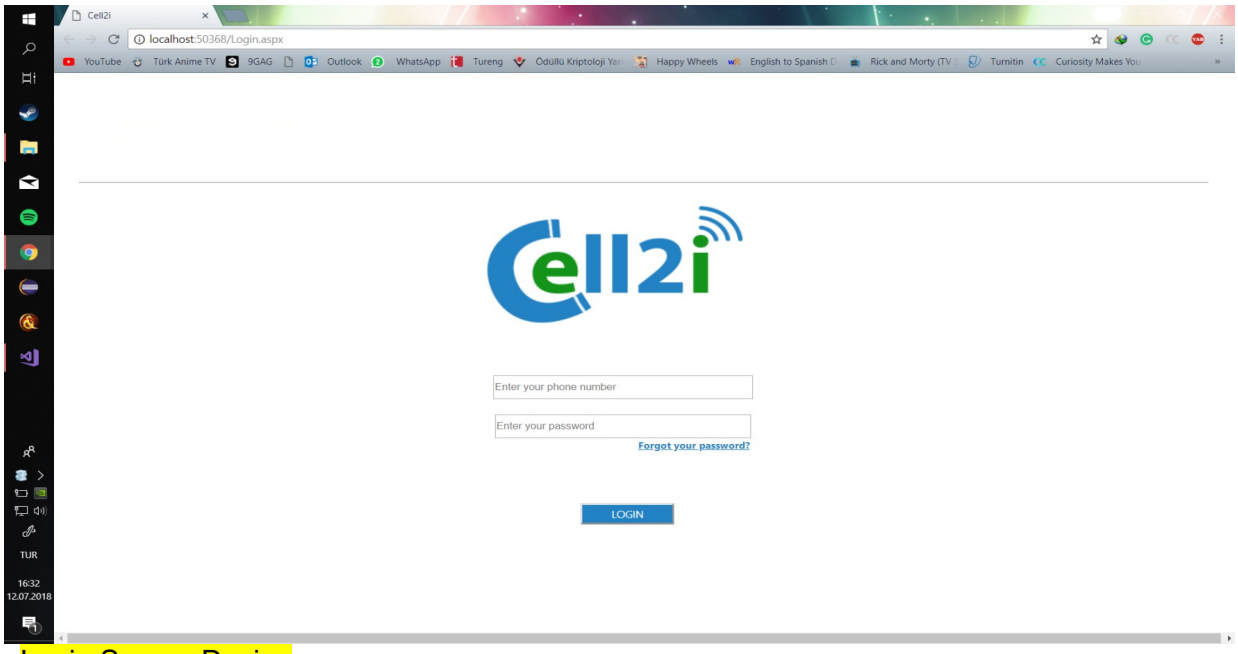
and also we do some arrangement to web service to connect database with has specifically commited in source code. In asp.net perspective we need to design like this:



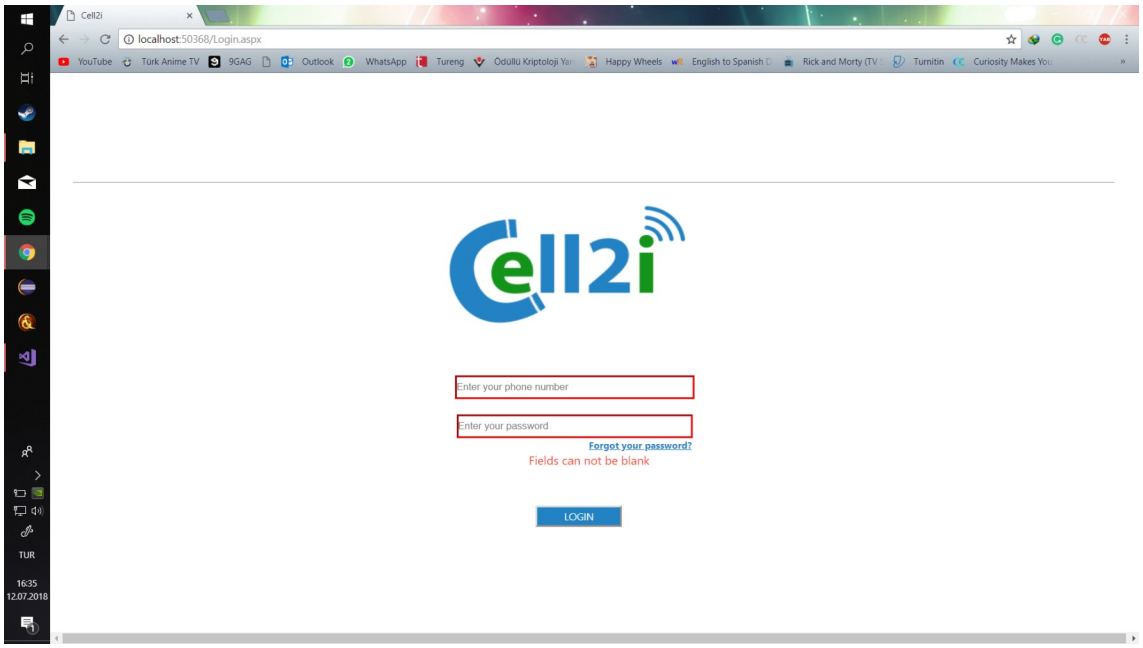
Forget Password Design



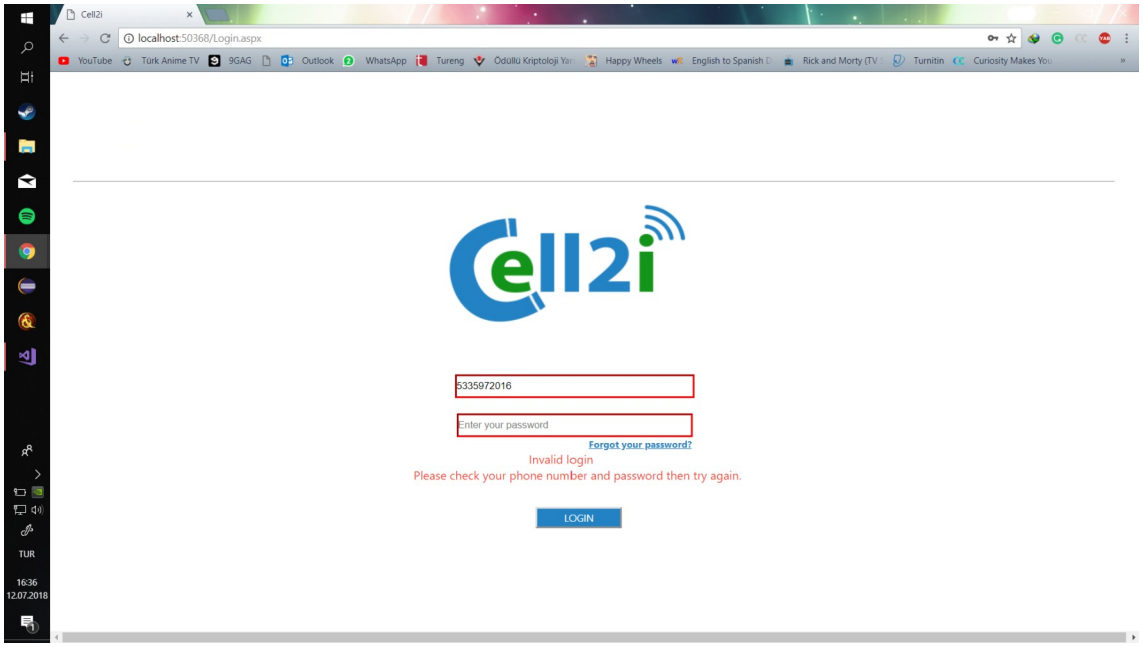
Forget Password with Error



Login Screen Design



Login Error Desing



Loggin Error Invalid

Reference

[1]:https://www.slideshare.net/milkers/telecom-billing-quick-guide-telecom-billing-introduction page :1

[2]https://www.slideshare.net/milkers/telecom-billing-quick-guide-telecom-billing-introduction page 2

[3]]https://www.slideshare.net/milkers/telecom-billing-quick-guide-telecom-billing-introduction page 8

[4]https://www.oxforddictionaries.com/

[5]Dictionary of Computing Publisher: Oxford University Press Print Publication Date: 2016 ISBN-13: 9780199688975 Published 016 eISBN: 9780191768125

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