CS795: Secure Distributed Systems With .Net
Summer 2015
Homework #1
Due: May 27, 2015

This programming assignment deals with ASP.Net. Create an application that meets the following specifications. Assume this application is restricted for use by different groups in an organization. Outsiders can see the start page but if they don’t use one of the given secret keys, the system simply shows the same screen. (It does not prompt the user that it is an invalid code.)

(1) There are four types of keys: Patient: $$$; Staff: %%%; Physician:***; Administrator: @@ @.

(2) At the start page, users enter their login name and a key. Depending on the key the user enters (into a textbox) and submits (using a submit button), the user will be redirected to that form. If invalid, the user is simply shown the same form. (The name is not used in checking---only while entering.)

(3) Patient: the user is shown a picture of the hospital (any hospital building that looks good). In addition, the following options are provided, each of which may be selected by clicking a button or making a selection.
   a. Show a list of available physicians for each specialty. Each item is a hyperlink when clicked would show the details of the physician and a link to the medical college where the physician received his/her training. On clicking the link, the hospital/university website where the training took place will be opened.
   b. Show the calendar for 2015 where patient can choose the desired month. Show the availability of the days when the physician is available in that month. The patient can click on a day and schedule an appointment.
   c. Show the customer service representatives in the organization and their e-mail addresses.

(4) Staff: The staff member will be able to do all that is done under patient. In addition, the following options are provided.
   a. First, the staff is displayed a list of physicians and their specialty.
   b. Once a physician is chosen, the staff sees a calendar.
   c. Once the staff chooses a month/day, the staff can see a list of appointments for that day along with patient names and their e-mail addresses.
   d. It also lets the staff set an appointment for a patient..

(5) Nurse: A nurse will be able to do all that is done under Staff. In addition, the following options are provided.
   a. The nurse can see a selected patient’s past history (last visited date, temperature, blood pressure, pulse rate, etc.).
   b. The nurse can enter the new measurements taken by him/her that day. Check the validity of the entered data string using a Regular expressionvalidator to validate and show any error messages. (http://www.regular-expressions.info/dotnetexample.html).
(6) Physician: The physician will be able to do all that is done above. In addition, the following are provided:
   a. For a chosen patient, the doctor can enter the comments about his/her observations after that day’s visit of the patient. You can choose a list of common symptoms and let the physician select one or more symptoms from that list for that patient.

(7) Administrator: The administrator will be able to do all that is done above. In addition, the following are provided:
   a. See the list of physicians
   b. See the list of nurses
   c. See the list of staff members
   d. See the list of patients
   e. For a patient, see which nurse/physician attended on them

What to submit? Show demo of your program on the day it is due. Submit your code.