

Open Source Web Programming (Exercise one)

DUE DATE : 2016-06-25

ANSWER ALL QUESTIONS : Total 25 marks

Suggestions: Design according to the requirements. Keep it simple and there is no need to produce elaborate web pages.

1. Wine Tours Vienna offers unique wine tasting experience to registered customers. The winery has a web site for visitors to register and to log in to order discount wine tasting tickets in the summer season. The front page contains the following information.

- a. The name of the winery is at the top-left corner of the page.
- b. There are two tabs horizontally aligned beneath the winery name. One tab is labeled with the text 'Registration', the other tab with the text 'Login'.
- c. Beneath the tabs is a rectangular area.
  - i. When the mouse cursor is moved upon the Registration tab, a registration form instantly appears in the rectangular area. It contains three text input fields placed vertically so that a customer can enter a name, an email address and a password suggested by a customer respectively. There is a submit button at the left-bottom of the rectangular area. When the submit button is clicked, an acknowledgment message with a customer ID appears to the right of the submit button.
  - ii. When the mouse cursor is moved upon the login tab, a login form instantly appears in the rectangular area. It contains two text input fields placed vertically for a customer to type in a customer ID and a password. There is a submit button at the left-bottom of the rectangular area. The input fields will be validated when the submit button is clicked. If the validation is successful, an image of a glass filled with wine appears inside the rectangular area together with a message about the place where the customer can pick up two discount tickets.
  - iii. Here are the constraints in the input fields: At least five alphabetic characters for the name, an email address with a correct email format, and 5 numerical digits for the password and customer ID.
  - iv. If the letters typed into an input field does not conform to the constraints, a red error message will instantly appear at the right of the input field when the mouse cursor is moved away from the input field.

Use AJAX, PHP with validation and Javascript to construct a prototype of the front page. (18 marks)

2. Write a set of comprehensive test cases to verify the correctness of your implementation. (4 marks)

3. Write a design summary of about 300 words about your design in question 1. (3 marks)

Please include the source code for question 1 in Appendix A and selected essential screen captures of the test results in Appendix B.

Please use the convention [Yourname\_StudentID\_Ex1.doc] to name your assignment when it is submitted.

EX1:Sample winery front page

## ***Wine Tours Vienna***

Registration	Login
<b>Your Full Name:</b> <input type="text"/>	
<b>Email:</b> <input type="text"/>	
<b>Type in a new password:</b> <input type="text"/>	
<input type="button" value="Submit"/>	


## ***Wine Tours Vienna***

Registration	Login
<b>Your Full Name:</b> <input type="text" value="John"/> <b>Error: At least 5 alphabets.</b>	
<b>Email:</b> <input type="text"/>	
<b>Type in a new password:</b> <input type="text"/>	
<input type="button" value="Submit"/>	

## ***Wine Tours Vienna***

Registration	Login
<p><b>Customer ID:</b></p> <input type="text"/>	
<p><b>Type in your password:</b></p> <input type="password"/>	
<input type="submit" value="Submit"/>	

## ***Wine Tours Vienna***

Registration	Login
<div><p><b>Please claim two discount tickets at the winery guest house with your Customer ID. Thank you!</b></p></div>	

Open Source Web Programming ( Exercise Two)

DUE DATE : 2016-07-16

ANSWER ALL QUESTIONS : Total 25 marks

Suggestions: Design according to the requirements. Keep it simple and there is no need to produce elaborate web pages.

1. Kappa Planetarium has a web site that allows registered customers to buy tickets for the omnimax shows in its dome screen theatre. The site has a login page which has the following features:

- a) The name of the planetarium is at the top-centre of the page. Below it are two text fields and a submit button. One text field allows a customer to type in a customer ID and the other a password.
- b) After a customer has clicked the submit button and upon correct validation of the customer ID and the password, the login content below the name of the planetarium will be instantly replaced by ticket purchasing content on the same page.
- c) The ticket purchasing content consists of a list of omnimax events. Each event is labeled with the name of the film, the date, the show time, the price for one ticket and an input text field which allows a customer to type in the number of tickets to be ordered for each event. A buy button and an exit button are located at the bottom of the page.
- d) When the buy button is clicked and after the validation of the values in all the input fields, an acknowledgment message which contains the film, the show data/time, the number of tickets and the subtotal ticket price for each event, and the total price of all the tickets should appear at the bottom of the page.
- e) When the exit button is clicked, the login page appears. If the same customer logs in within 24 hours, a welcome message with the customer ID will appear before the ticket purchasing content. Otherwise, there is no welcome message.
- f) The customer ID must be a text of seven alphabetic characters. The password must be a 6-digit number. The number of tickets must be a non-zero integer.
- g) All text fields have instant data validation. A red error message will appear next to the text field if the text field has been filled with incorrect information.

Use PHP cookies, PHP sessions, AJAX and Javascript to design and construct a web page according to the above requirements. (18 marks)

2. Write a set of comprehensive unit and functional test cases to verify the correctness of your implementation.(4 marks)

3. Write a design summary with about 300 words on your design in Question 1. (3 marks)

Please include the source code for question 1 in Appendix A and essential screen captures of the test results in Appendix B and use the convention [Yourname\_StudentID\_Ex2.doc] to name your assignment when it is submitted.

Ex2: Sample web page

# Kappa Planetarium

Customer ID

Password

# Kappa Planetarium

## Omnimax Shows

Welcome back, John!

Film	Show Date	Show Time	Price	Number of Tickets
The Solar System	2016-04-02	11:00	\$40.00	
		13:00	\$40.00	3
		16:00	\$40.00	
		20:00	\$40.00	
Deep Space	2016-04-09	11:00	\$40.00	
		13:00	\$40.00	
		16:00	\$40.00	1
		20:00	\$40.00	
Milky Way	2016-04-10	11:00	\$40.00	
		13:00	\$40.00	
		16:00	\$40.00	
		20:00	\$40.00	

You have brought the following tickets, thank you!

Film: The Solar System	Date/Time:2016-04-02/13:00	Number of Tickets:3	Subtotal:\$120.00
Film: Deep Space	Date/Time:2016-04-09/16:00	Number of Tickets:1	Subtotal:\$ 40.00
			Total:\$160.00

Open Source Web Programming ( Exercise Three)

DUE DATE : 2016-08-06

ANSWER ALL QUESTIONS :Total 25 marks

Suggestions to complete the assignments: Design according to the requirements. Keep it simple and there is no need to produce elaborate web pages.

1. ZZZ International Airport has an arrival-departure information page on its website. It has the following features:

- a) The name of the airport is on the top-left corner of the page, below which are two tabs. One is labeled Arrival and the other Departure. A digital clock showing the current date and time with the format 'year-month-day hour:minutes' is on the right of the tabs.
- b) When the mouse cursor is over the arrival tab, a table of all the arrival passenger carriers within the same day will appear instantly below the arrival-departure tabs.
- c) There are six columns in the table. They are Time, Flight Number, Origin , Airline , Arrival Hall and Status respectively.
- d) When the mouse cursor is over the departure tab, a table of all the departure passenger carriers within the same day will appear instantly below the the arrival-departure tabs.
- e) There are seven columns in the table. They are Time, Flight Number, Destination ,Terminal, Gate, Airline and Status respectively.
- f) The data types for the columns are: hour:minute for Time, two alphabetic characters followed by three- or 4-digit number for Flight Number, alphabetic characters for Origin or Destination, alphabetic characters for Airline, letter A, B or C for Arrival Hall, T1, T2, T3 or T4 for Terminal, and three- or two-digit number for Gate..
- g) The text for the Departure Status can only be Gate Closed, Final Call, Boarding, Boarding Soon, Canceled or Est hour:minute.
- h) The text for the Arrival Status can only be Canceled, Est at hour:minute or At gate hour:minute.

Use PHP, XML or JSON, MySQL, AJAX and Javascript to design and construct the web site according to the above requirements. (18 marks)

2. Write a set of comprehensive unit and functional test cases to verify the correctness of your implementation.(4 marks)

3. Write a summary with about 300 words on the design in Question 1. (3 marks)

Please include the source code for question 1 in Appendix A and screen captures of the test results in Appendix B and use the convention [Yourname\_StudentID\_Ex3.doc] to name your assignment when it is submitted.

Ex3: Example information page. The top screen capture is for arrival, the bottom for departure.

## ZZZ International Airport

**ARRIVAL** **DEPARTURE** 2016-4-15 20:11

Time	Flight	Origin	Airline	Hall	Status
20:20	CX369	Shanghai/PVG	Cathay Pacific		Est at 21:33
	KA5369		Dragonair		
20:20	HX158	Haikou	Hong Kong Airlines		Cancelled
20:20	KA221	Da Nang	Dragonair		Est at 20:23
	CX5221		Cathay Pacific		
20:20	GK063	Osaka/Kansai	Jetstar Japan		Est at 20:42
20:25	CX776	Jakarta	Cathay Pacific	A	At gate 19:58
	AA8912		American Airlines		
	BA4574		British Airways		
20:25	CX807	Chicago	Cathay Pacific	A	At gate 19:56
	AA8922		American Airlines		
20:30	CI937	Kaohsiung	China Airlines		Est at 21:20
20:35	FD524	Phuket	Thai AirAsia	C	At gate 20:10
20:35	AK130	Kuala Lumpur	AirAsia		Est at 20:32
20:40	CX521	Tokyo/NRT	Cathay Pacific		Est at 21:45
	QR5807		Qatar Airways		
	JL7047		Japan Airlines		
20:40	CX581	Sapporo	Cathay Pacific		Est at 21:14
	JL7061		Japan Airlines		
20:45	HX693	Sapporo	Hong Kong Airlines		Est at 21:18

## ZZZ International Airport

**ARRIVAL** **DEPARTURE** 2016-4-15 20:18

Time	Flight	Destination	Terminal	Gate	Status
20:30	MH 433	<u>Kuala Lumpur</u>	T1	28	Gate Closed
20:30	QF 030	Melbourne	T1	25	Gate Closed
20:45	MF 8016	<u>Xiamen</u>	T1	41	Est 21:00
20:45	TG 607	Bangkok	T2	50	BoardingSoon
20:50	HX 452	Chengdu	T1	206	BoardingSoon
20:50	UO 1226	<u>Ningbo</u>	T2	53	Est 21:45
20:50	QF 118	Sydney	T1	24	BoardingSoon
20:55	HX 496	Chongqing	T1	219	BoardingSoon
20:55	BR 858	Taipei	T1	32	BoardingSoon
21:00	5J 115	Manila	T1	201	BoardingSoon
21:05	HX 128	Hangzhou	T1	217	Est 21:35
21:10	FD 525	<u>Phuket</u>	T2	203	BoardingSoon
21:10	KQ 861	Bangkok	T1	27	Est 21:00

Open Source Web Programming ( Exercise Four)

DUE DATE : 2016-08-27

ANSWER ALL QUESTIONS :Total 25 marks

Suggestions to complete the assignments: Design according to the requirements. Keep it simple.

1. FAST Container Shipping Line is a global carrier of containers. It has a web site containing an information page for company staff members and customers to view vessel schedules. This information page has the following features:

- a) The name of the company is at the top-left of the information page, beneath which is a row of two tabs. One is labeled Transatlantic and the other Transpacific. Beneath the tabs is a table with nine columns.
- b) The columns are Voyage, Vessel, Departure Port, Dep Date, Dep Time, Arrival port, Arr Date and Arr Time.
- c) When a user clicks the Transatlantic or the Transpacific tab, the vessel schedule for the transatlantic or the transpacific voyages will be shown on the same page.
- d) Voyage is a 4-digit number that specifies a row uniquely. Vessel is the name of the vessel in alphabetic characters, for example, KAM MEXICO, Norton Express, York STAR. Departure Port is the name of a port, for example, Hong Kong, TaiChung, Houston, Southampton, Rotterdam.
- e) None of the attributes can be edited by a user.
- f) Each column has a button. Its purpose is to allow a user to arrange the table in descending or ascending order according to the content of the clicked column.
- g) There is one scroll forward button and one scroll backward button for a user to view the next portion of the table.
- h) There is a menu for user to choose a page to view on the table.
- i) There are 5 rows per page. There is a line of information showing the total number of rows in the table.

Use PHP, AJAX/jQuery, jqGrid, MySQL and Javascript to design and build an information page.(18 marks)

2. Write a test plan for the web page in Question 1. (4 marks)

3. Write a design summary with about 300 words on the design in Question 1. (3 marks)

Please include the source code for question 1 in Appendix A and screen captures of the test results in Appendix B and use the convention [Yourname\_StudentID\_Ex4.doc] to name your assignment when it is submitted.



## FAST Container Shipping Line

Transatlantic Transpacific

Transatlantic Schedule							
Voyage	Vessel	Dep Port	Dep Date	Dep Time	Arr Port	Arr Date	Arr Time
6566	KAM MEXICO	Houston	2016-05-11	15:00	Rotterdam	2016-05-28	19:00
6772	Norton Express	Virginia	2016-05-28	11:00	Southampton	2016-05-31	00:00
6561	ACS VIRGINIA	Savannah	2016-05-18	15:00	Rotterdam	2016-06-04	19:00
6770	YORK STAR	Houston	2016-05-19	13:00	Rotterdam	2016-06-07	23:00
6566	Altar MEXICO	Houston	2016-05-11	15:00	Hamburg	2016-05-28	19:00

1 / 3 10 24 Row(s)

## FAST Container Shipping Line

Transatlantic Transpacific

Transpacific Schedule							
Voyage	Vessel	Dep Port	Dep Date	Dep Time	Arr Port	Arr Date	Arr Time
7166	Oriental Express	Hong Kong	2016-05-09	10:00	Long Beach	2016-05-28	19:00
7729	TransGlobe	Long Beach	2016-05-18	12:00	Singapore	2016-06-06	21:00
5761	Venus	Tokyo	2016-05-10	15:30	Seattle	2016-05-30	19:00
7700	Pacific STAR	Nagoya	2016-05-12	13:00	Long Beach	2016-06-02	23:00
5775	La Spezia	Singapore	2016-05-12	13:00	Los Angeles	2016-06-06	23:00

1 / 3 10 24 Row(s)