

## Practical Assessment

### Problem 1

Consider a page with 3 HTML select controls.

Dropdown 1	Dropdown 2	Dropdown 3
Colors	Dark	Black
		Brown
		Grey
	Light	Red
		Green
		Blue
Fruit	Ripe	Banana
		Apple
		Orange
	Rotten	Pear
		Peach
		Mango

#### To Do:

1. By default load the options into Dropdown 1 control, and select the first option.
2. When an option is selected in Dropdown 1, update the available options in Dropdown 2.

EG: User Selects "Fruit" from Dropdown 1.

Update Dropdown 2 to list the available options "Ripe", "Rotten"

3. When an option is selected in Dropdown 2, update the available options in Dropdown 3.

EG: User Selects "Rotten" from Dropdown 2.

Update Dropdown 3 to list the available options "Pear", "Peach", "Mango"

#### Notes:

All values for all dropdowns are stored in PHP, and must be retrieved from PHP.

The PHP has already been provided on flash drive in challenge/problem\_1.php

The HTML has already been provided on flash drive in challenge/problem\_1.html

All dynamic interaction must be facilitated using JQuery.

## Problem 2

Patient bill						
Patient #: 12345			Date: 7/20/08			
Patient Name: Mary Baker			Date admitted: 7/14/08			
Patient Address: 617 Boeing street, Elarduspark			Discharge date: 7/17/08			
CityProvinceCode: Pretoria, Gauteng, 0181						
Cost Center	Cost Name	Date Charged	Item Code	Description	Charge	Bal Due
100	Room & Board	7/14/08	2000	Semiprv room	200.00	
		7/14/08	2005	Television	5.00	
		7/15/08	2000	Semiprv room	200.00	
		7/16/08	2000	Semiprv room	200.00	
				Subtotal		605.00
110	Laboratory	7/14/08	1580	Glucose	25.00	
		7/15/08	1585	Culture	20.00	
				Subtotal		45.00
125	Radiology	7/15/08	3010	Xray chest	30.00	
				Subtotal		30.00
				Balance due		680.00

### To Do:

1. Construct a set of normalized tables from the bill above (just indicate tables, fields, PK and FK).
2. Based on your design, write a query to calculate the average Laboratory charge per patient.

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## Problem 3

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The Fibonacci sequence is constructed by adding the last two numbers of the sequence so far to get the next number in the sequence. The first and second numbers of the sequence are defined as 0 and 1. We get:

0		1		1		2		3		5		8		13		21
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Write a function in PHP that returns the nth number of the sequence.

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## Problem 4

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Write a function in PHP that will print all the products of 7 till 300 in the format "7 x 1 = 7, 7 x 2 = 14, ..., 7 x 300 = 2100".

### Notes:

1. Only for loop is allowed.
2. Do not use multiplication, rather use addition to compute the products.

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## Problem 5

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Consider the javascript code provided on the flash drive in challenge/problem\_5.html

1. Show the current output.
2. Explain why the output is not as expected.
3. Propose a solution to the problem.

