

National University of Computer and Emerging Sciences, Lahore Campus



Course:	Web Programming	Course Code:	CS-440
Program:	BS (Computer Science)	Semester:	Spring 2018
Duration:	60 Minutes	Total Marks:	25
Paper Date:	27-Feb-18	Weight	12.5 %
Section:	A & B	Page(s):	2
Exam:	Midterm-I	Reg. No.	

Instruction/Notes: This exam is open books and open notes.

Consider a case of an online examination system, which can be used by an instructor to design and administer an exam to students. An exam can comprise of questions that may be of several types (e.g. multiple choice, fill in blanks, etc.) as illustrated in the figure below:

Question 1 of 2 1.0 Points

World Wide Web was invented by?

☐ A. Vinton Cerf

☐ B. Robert Kahn

☐ C. Tim Berners Lee

☐ D. Marc Andreessen

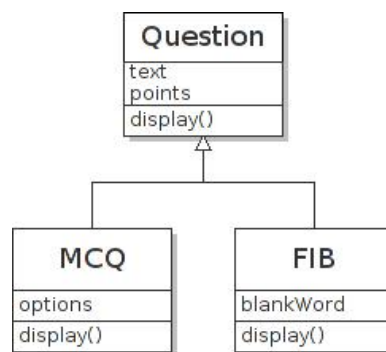
☐ E. Roy Fielding

[Reset Selection](#)

Question 2 of 2 1.0 Points

HTTP is an layer protocol

Consider the following class diagram for the Question hierarchy:



A basic Question has two attributes: **text** that contains the statement and **points** that may be earned on correct answer. MCQ (multiple choice) is a special question type that has an **options** attribute for a list (array) of choices. Likewise, FIB (fill in blank) is a special question type that has a **blankWord** attribute representing that word in the question text which is to be left as a blank (for students to answer). All Question types has a **display** function to generate the correct HTML.

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Question 1 (Javascript)

(5+5+5 pts)

- (a) Write object-oriented Javascript code using the **constructor** functions to show how to realize the **Question** inheritance hierarchy. You cannot use the **class** based syntax.
- (b) Give detailed implementation of MCQ **display** function to generate correct HTML for MCQ.
- (c) Give detailed implementation of FIB **display** function to generate correct HTML for FIB.

Question 2 (CSS)

(5+5 pts)

- (a) Write a CSS rule to style all radio buttons (input type radio) that are used to represent options of a MCQ only (and not any other radio button used elsewhere), such that options are stacked vertically. Use your own HTML (in answer to Q1.b) as a basis to determine structure.
- (b) Describe the resultant style effect of the following CSS rules on the given HTML below:

```
p , .text { font-weight : normal ; padding-left : 0px ; color : black}

.text { background-color : grey }

p.text { font-weight : bold ; padding-left : 10px }

<p class='text'> World Wide Web was invented by?</p>
```