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Computing Skills

Lab Session 1 - Using the Network

Dr Martin Bateman
mbateman@uclan.ac.uk

Introduction

In this lab you will be extending your quiz application to use Web Services and TinyWebDB.

The Quiz Web Service provides exposes two APIs the first allows you to get a list of categories that the questions will be in. This can be called as

<http://193.61.245.60/getCategories.csv>

The example output is below

"baby","education","medical","money","space"

This is a CSV list of an indeterminate length, where each element is a category.

You can then retrieve a question using either

<http://193.61.245.60/getQuestion.csv>

to get a question from any category. Or use the

<http://193.61.245.60/getQuestion.csv?cat=<category>>

Where <category> is replaced by one of the categories received from the getCategories call. If you pass the getQuestion.csv an invalid category it will return a CSV list with the first element set to 'Error'.

An example response from the getQuestion.csv Web Service is shown below.

"Who was the world's first programmer?", "Countess Ada Lovelace", "Alan Turing", "Nick Mitchell", "Charles Babbage", "A"

Where

- Element 1 is the question.
- Element 2 is the text for option A.
- Element 3 is the text for option B.
- Element 4 is the text for option C.
- Element 5 is the text for option D.
- Element 6 is the letter of the correct answer.

Instructions

You should build a Quiz App, using the Web Services described here that allows you to select a category of questions, select whether you are going to answer 5, 10 or 15 questions.

If you get to here show the tutor and earn a point.

Answer the following questions, show your answers to the tutor and earn a point for each correct answer for team.

- Why does the Web Service Component use the Web.GetText event handler, why not just return the text received from the Web.Get procedure call?
- Why should you use the hostname rather than an IP address when building networked applications?
- Why do you think that percent encoding is needed for Web Service parameters?

Weekly challenge

To meet the minimum specification your application should:

- Allow the user to choose a category of questions.
- Allow the user to decide how many questions they will answer (5, 10 or 15).
- Display the questions and allow the user to select an answer.
- Show a running score.
- Have a high scores table showing the top ten scores which is saved to TinyWebDB.
- Have a well designed user interface.

There are many ways to enhance your application. Topics will be covered in Lectures and within Labs which should give you ideas. As always it is better to have something simple that works rather than something impressive that doesn't!