School of Computing and Engineering

Digital Media

University of HUDDERSFIELD

Module Title	**Introduction to Web Programming**
Code	**CFT2111**
Assignment Title	**Assignment 2: 'Mobile Phone Deal Finder' JavaScript Web Application**
Module Tutor	**Matthew Mantle**

Assignment aims

This assignment provides an opportunity for students to demonstrate their understanding of basic programming concepts. Students will be required to analyse a problem statement and then design and build a JavaScript program that provides a solution to this problem.

Learning outcomes to be assessed

1. Knowledge and understanding

Upon completion of this module, the learner will be able to:
1.1 Discuss a range of client-side web and Internet technologies.
1.2 Explain approaches to web site design and implementation.

2. Abilities

Upon completion of this module the learner will be able to:
2.1 Apply design techniques and web technologies to build web sites.
2.2 Develop client-side scripts to implement dynamic behaviours and interactivity.

Problem statement/evidence to be submitted

Choosing a mobile phone contract can be tricky. Different networks offer different phones, different allowances for text messages, talk minutes and data, and different lengths of contract.

You are required to build a 'deal finder' system that will allow users to enter preferences for the type of phone contract they would like: the network, data allowance, length of the contract etc. Based on these preferences, the application will recommend suitable mobile phone tariffs. Your application should feature the following eleven tariffs. You may add some additional tariffs if you wish but the application must feature the following.

Brand	Model	Network	Minutes	Texts	Data	Upfront cost	Monthly Cost	Length of Contract
Motorola	StarTAC	Z-Mobile	300	3500	N/A	0	5	24

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Nokia	3310	0_3	100	5000	N/A	0	2	24
Apple	iPhone 5c	Fodavone	300	Unlimited	250 MB	0	22	24
Apple	iPhone 5c	NN	1000	Unlimited	2 GB	49	34	18
Samsung	Galaxy S5	0_3	500	Unlimited	500 MB	0	24	24
Samsung	Galaxy S5	Fodavone	600	Unlimited	1GB	0	27	24
LG	G3	NN	1000	Unlimited	1GB	0	31	24
Nokia	Lumia 925	Fodavone	600	Unlimited	500MB	0	27	18
LG	Optimus L7 2	NN	250	5000	500MB	0	12	24
Sony	Xperia Z3	0_3	Unlimited	Unlimited	1GB	79	38	24
Sony	Xperia Z3	NN	Unlimited	Unlimited	10GB	0	44	24

The web application you create must conform to the following basic requirements:

- An HTML form should be used to gather user preferences. The user will need to enter
  - Their name
  - Email address
  - Preferences based on the table above.
- Suitable validation of user input should take place.
- The application should then respond by displaying the tariffs that match the user's preferences.
- The application should be written using HTML5, CSS and JavaScript.
- There should be no use of server-side scripting.
- There should be no use of JavaScript frameworks e.g. jQuery.
- The application must use the data provided above.

Higher marks will be awarded to applications that

1) Provide flexible matching and selection of criteria. For example, the user may be able to specify a number of different phones they are interested in or the user may be able to specify 'no preference' for some criteria e.g. the user might not care which network their contract is with. This is a challenge not only of your programming abilities (flexible matching and selection is harder to implement), but also of your design abilities. You will need to select appropriate form controls and think carefully about how you word questions to create an application that is intuitive and easy to use.

2) Rank matching tariffs. For example, by price lowest to highest.

Submission Details

You are required to submit the following by **23:59 Friday 1st May 2014 (Term 2: Week 12)**

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To the selene web server:

- The final website at the URL: ***https:/selene.hud.ac.uk/uxxxxxxx/assign2/index.html***
  (where uxxxxxxx is your student number)

To the module's digital dropbox on Unilearn.

- **A zipped folder containing the final website. No .rar or 7z!**
- This folder should contain all the files necessary (HTML, CSS, images etc.).
- When you submit the work there will be a text area labeled 'submission'. **You must enter a HTML link to your uploaded assignment on Selene into this box. Failure to do so will result in your work not being marked!**

Assignment weighting

60% of all module assessment

Identification of group and individual components

This is an individual assignment it involves no group components

Assessment criteria and weightings

		Grade				
Component	**A+**	**A**	**B**	**C**	**D**	**E/F**
Validation of User Input (10%)	Comprehensive validation. Effective use of the DOM to dynamically indicate validation problems	Same as an A+ but is weak in some minor aspect.	Comprehensive validation - tests a range of different form elements and gives clear appropriate feedback stating what the problem is and where.	Basic validation with room for improvement. For example, testing whether user has completed fields, but doesn't test if they have entered data in the correct format.	Basic validation with significant room for improvement e.g. identifies problems, but doesn't specify where.	Validation attempted but doesn't work Or validation not attempted (F/N)
Gathering User Preferences (10%)	Excellent. Uses a range of form elements appropriately with clear consideration given to the type of controls and options	Same as an A+ but is weak in some minor aspect.	Gathers user's preferences with a range of HTML form elements used appropriately. Room for improvement e.g. choice of form controls/options available.	Uses an HTML form but limited range of elements e.g. only textboxes.		Uses prompt boxes / Fails to gather all preferences / doesn't work

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	the user will need to choose from.					
Matching to User Preferences (20%)	Robustly and flexibly matches tariffs to user preferences, ranks the different tariffs accurately.	Same as an A+ but is weak in some minor aspect.	Same as an A+ grade but has significant weaknesses e.g. program isn't very robust, doesn't rank the films. The extent of the weaknesses will determine B or C grade.		Matches a **single** film to user preferences and displays the result	Partially matches a single film to user preferences but doesn't consider all the factors (E grade) Or (F grade) program doesn't work
Use of JavaScript (40%)	Significant evidence of independent study e.g. object oriented programming, advanced DOM scripting, validation.	A sophisticated application that has been developed with effective use of a wide range of programming features including loops, objects, arrays and functions (not just event listeners).	Same as an A grade but has significant weaknesses		Use of variables, conditionals, event listener functions, but little or no effective effective use of loops and arrays.	Program doesn't fully work indicating limited understand of JavaScript
Commenting and Formatting of Code (10%)	An ambitious complex application that has been clearly commented and the code is presented neatly.		Same as an A grade but is weak in some aspect e.g. comments could be more comprehensive / useful.	A simple program that is neatly formatted with good commenting or a complex program that is poorly with respect to commenting and formatting of code	Little use of comments and/or comments have limited value.	No use of comments
Presentation of the Application (10%)	The application uses an HTML form to gather data and the DOM to present output. Excellent application of CSS including CSS3 properties to present both the input form and the output. The design is ambitious and sophisticated.	The application uses an HTML form to gather data with appropriate choice of form elements. Excellent application of CSS to present both the input screen and format the output.	The application uses an HTML form to gather data with appropriate choice of form elements. Good application of CSS to present both the input screen and the output screen. Room for improvement e.g. range of properties/selectors used.	The application uses an HTML form to gather data. CSS has been applied to present both the input screen and the output screen. Significant room for improvement e.g. very limited application of CSS.		The application uses prompt boxes to gather data from the user. Output is poorly formatted / no application of CSS

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Allocation of study time to this module*

Given that learners have completed all the practical sessions, undertaken the unsupervised activity each week, this assignment is expected to take approx. 24 hours to complete (three eight-hour days).

Hand out date:	**Hand in date:**
Term 2 : Week 01	Term 2: Week 12 : **Friday 1st May 2014**

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