Answers

Task 1

Go to Lings Cars at: <https://www.lingscars.com/>

(a) The site has been criticised for its poor user experience. What are five areas of the home page that you believe make the user experience poor?  
  
The site contents vary often, as such, the following suggested answers may not fully apply to any new site design  
  
The site uses animated GIFs which are distracting

The overall feel of the site is unprofessional which doesn’t lead to trust

Menu buttons do not change colour when the user hovers

There is a very large amount of information making it hard for a user to understand what the site does and what their next action should be

The background used is very distracting

The right hand cars look like links (some of them hover), but they are not hyperlinks

Mixed use of serif and sans-serif fonts are inconsistent

(b) Comment on other areas of the user experience such as performance, availability and accessibility.  
  
**Performance:** The website loads quickly

**Availability:** The website has a good uptime and can be accessed any time of   
day or night

**Accessibility:** It makes use of HTML, so the text can be read by screen-readers

(c) There are a number of simple and easy changes to the website that would improve its design. Why do you think that Ling has decided to keep the original style of website design?  
  
The area of car leasing is competitive, and many sites exist to do this, all of which look similarly professional. The ‘unique’ site design from Ling is memorable and brings attention to her business – as such the site design is used as a marketing strategy.

Task 2

The responsiveness of a web page is judged by how long a user has to wait for the page to first show meaningful content. Users will often give up waiting for a page within seconds of trying.

Go to: <https://developers.google.com/speed/pagespeed/insights/>

The “First Contentful Paint (FCP)” is the time taken from a web page being requested to a web browser rendering the first part of the web page.

Try some websites that you use frequently to find the FCP load time of each. Complete the table below with your findings. The first row has been completed as an example.

|  |  |
| --- | --- |
| **Web address** | **First Contentful Paint (FCP) time (seconds)** |
| https://en.m.wikipedia.org/wiki/Tim\_Berners-Lee | 2.1 seconds |
| Answers to this table depend on the web addresses selected by the students. |  |
|  |  |
|  |  |
|  |  |
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Task 3

When IT systems don’t work, they have many negative impacts on both the users of the system and those that designed and implemented them. Discuss two different impacts that poorly developed IT systems may have.

**Points that could be discussed:**

Users become frustrated when systems don’t work. This has the effect that they may use the system in unintended ways or not at all. A poorly developed IT system will lead to employees being unproductive. This will then affect the profitability of a company.

The reputation of those who developed the system will be affected. An unreliable system may make the total cost of ownership more expensive. It may also cause customers to look to other providers. Should the software not be accessible, people with specific needs may start to use different software. Alternatively, the company may be breaking the law that prevents discrimination due to disability. (Equalities Act / Disability Discrimination Act).

Task 4

Sadly, there are many examples of IT projects that have failed to deliver a finished product or service on time. Between 2000 and 2005, The Federal Bureau of Investigation (FBI) developed a software application called Virtual Case File (VCF). The project was cancelled whilst in the development stage with costs of around $170 million. Research the Virtual Case File project to answer the following questions.

(a) Who were the intended end users of the system?

FBI agents

(b) What were some of the end user needs?

To help FBI agents share data about cases in progress.  
Also to help terrorist investigations.

Modern desktop PCs were to be provided in all offices and connected via high-performance WAN and LAN links. The hardware would give a platform to the   
software being developed.

(c) What reasons are given for the failure of the project?  
  
**Reasons include:**

Unclear initial designs.

Repeated changes to the scope of the project during its development time

Continuous changes in key personnel.

Too many FBI employees used as managers who were not trained in Computer Science.

Micromanagement of software developers.

Task 5

When new IT systems are created, thought must be given as to how the system will be brought online and used. There are numerous approaches to bringing a system live so that users can start integrating it into their daily workload routines.

Use the website <https://computersciencewiki.org/index.php/Implementation_methods> to help you complete the following questions.

(a) Identify the four main types of implementing IT systems.  
  
Parallel, phased, direct, pilot.

(b) Compare the advantages and disadvantages of the different types of implementing IT systems.

**Parallel**

* As it is two systems running side-by-side (old and new) the users can determine if all the functionality of the old system is available in the new one
* There is a reduced risk of data loss as both systems are available at the same time
* Two systems running at the same time means that users are having to double up their workload

**Phased**

* Easier for users to pick up elements of a new system incrementally
* There is less risk of failure as individual parts are introduced slowly
* This has the impact of making the switch over slow

**Pilot**

* Small test cases of the new system can give an indication to the performance of a system before a wider rollout
* The pilot study might not represent fully how the solution scales when used by the intended number of users

**Direct**

* Quickest of all methods to switch, (the old system is turned off and everyone then uses the new system)
* This can be a good method for non-critical systems
* The system must work correctly as it is the only system that will be used

Task 6

A 6th form college will, from September next year, be launching a new IT system. All student work that can be submitted electronically will have to be submitted using the system. All marks and feedback from teachers and tutors will need to be entered into the system.

(a) Suggest how training for the new system could be given to staff.  
  
Whole school training of key features delivered in after school training or on   
an INSET day.

Training delivered at department level during free periods or after school.

Documentation handed out of key features of the software.

(b) Suggest how training for the new system could be given to students.  
  
Page of key information given out at the start of the year – e.g. how to log in and submit work.

Videos of the system and how to use it posted on a streaming video website such   
as YouTube.

A walkthrough of key parts of the system during assembly / 6th form meetings.  
Online documentation of features students will need to access.

(c) Suggest how ongoing support could be given to both staff and students  
  
A member of staff could provide ongoing support in how to use the system.

An IT technician could give support for username/passwords and how to use   
the system.

Update letters/emails could be given with new features or areas that users have difficulty with.