YEAR

9

IT

Computing
@turton

Theme *1*
UX & UI

HOMEWORK BOOKLET

Name

Form

Introduction

Theme 1 is all about understanding the front-end of computer systems. We use user interfaces on a daily basis. How are they designed? What do designers think about when creating an interface? We will explore these questions.
We will also take a look at Human Computer interaction.
Towards then end of the theme we will undertake a creative project to plan and design a basic user interface considering the following:

- *Colours and font*
- *Layout*
- *Language used and information given*

At the bottom of each homework you will see an icon which will tell you how the homework will be assessed.
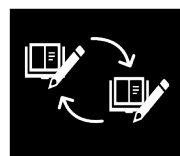*See below to find out what the icons mean:*

Self Assessment: You will mark your work at the start of next lesson.
ENSURE YOU COMPELTE HOMEWORK AS MARKS WILL BE COLLECTED IN!

If you see this on a homework. There will be an Edmodo Quiz based on the homework next lesson.
SO MAKE SURE YOU REVISE AND READ THE INFORMATION CAREFULLY!

If you see this on a homework it means you will be peer assessing the homework next lesson with another student.
MAKE SURE YOU HAVE YOUR HOMEWORK COMPLETED SO YOU CAN SWAP WITH ANOTHER PUPIL!

Failure to submit homework on time will result in a 45-minute detention.
If you lose your homework booklet you will be charged for a replacement and you MUST catch-up on any incomplete homework.

Stuck? Got a question? Email your teacher.

Mr Rifai *(Head of Computing)*	**rifaim@turton.uk.com**
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Miss Pascoe	pascoej@turton.uk.com

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H/W1 User Interfaces

What is an interface?

What are the three types of user interface?
1. _____
2. _____
3. _____

Research and find another type of user interface:

_____

_____

_____

Describe the mobile interface to the left. Use the following words:
Colour Icons Labels Design Experience

_____

_____

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WWW:

EBI:

Peer assessed by:

Computing@turton

H/W2 GUIs Explored

Read the article below. You will be quizzed next lesson:

Graphical user interfaces

- **Graphical user interface** is sometimes shortened to **GUI**. The user chooses an option usually by pointing a mouse at an icon representing that option.

Features of GUIs include:

- They are much easier to use for beginners.
- They enable you to easily exchange information between **software** using cut and paste or 'drag and drop'.
- They use a lot of **memory** and **processing power**. It can be slower to use than a command-line interface if you are an expert user.
- They can be irritating to experienced users when simple tasks require a number of operations.

When discussing user interfaces, it is important to note that **Windows XP**, **Windows Vista**, **Apple OSX** and **Ubuntu** all have **graphical user interfaces**.

Good user interfaces

A good user interface should:

- be attractive and pleasing to the eye
- allow the user to try out different options easily
- be easy to use
- use suitable colours for key areas
- use words that are easy to understand aimed at the type of user
- have help documentation

It should also consider the needs of the users. For example, young children are likely to prefer pictures to words and people with disabilities may benefit from particular **input** or **output devices**.

Edmodo

Quiz Score attained: ____ / ____

Read the following information and answer the question below:
(You will be quizzed on this information next lesson)

Natural Language Interface

This type of interface allows the user to speak or type in their normal everyday language in order to interact with the computer.

For example, some applications such as speech recognition software accepts the spoken words and converts them into text on the computer. These applications have a much wider vocabulary than the dialogue interface.

An example of a natural language interface which makes use of written text is a 'chat bot'. This software mimics a conversation - you ask it questions and it will come back with a suitable comment for you. This is the most technically challenging form of interface for the designers as it has to cope with different accents, dialects, slang, etc.

Write a short paragraph on how voice assistants such as Siri, Amazon Alexa, Google Assistant have changed day-to-day lives of people.

_____
_____
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_____

Edmodo

Quiz Score attained: _____ / _____

H/W4 Review Quiz

Answer the multiple choice questions below:

1 Which user interface allows the user to interact with the computer by typing instructions?

- ○ Menu driven interface
- ○ Graphical user interface
- ○ Command line interface

2 Who are command line interfaces best used by?

- ○ Novices
- ○ Experts
- ○ Children

3 Which operating system makes extensive use of a command line interface?

- ○ MAC OSX
- ○ MS-DOS
- ○ Windows Vista

4 Which user interface usually allows you to choose an option by clicking on the icon that represents it?

- ○ Command line interface
- ○ Graphical user interface
- ○ Menu driven interface

5 Which of the following is disadvantage of a GUI (graphical user interface)?

- ○ They require a large amount of memory and processing power
- ○ They're much easier for beginners to use
- ○ They're intuitive to learn

6 Which would be the most suitable user interface for a student to use when producing a report?

○ Command line interface

○ Menu driven interface

○ Graphical user interface

**7** Which would be the most suitable user interface for a computer programmer to use in order to access files quickly?

○ Command line interface

○ Menu driven interface

○ Graphical user interface

8 Which would be the most suitable user interface to use with a cashpoint machine?

○ Command line interface

○ Menu driven interface

○ Graphical user interface

9 Which interface uses the least memory and processing power?

○ Command-line interface

○ Menu driven interface

10 Which interface would be best for a beginner to use?

○ Command-line interface

○ Menu driven interface

○ Graphical user interface
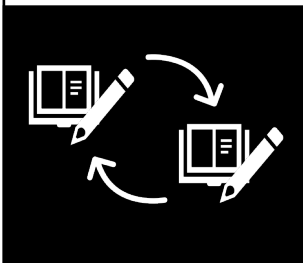
	WWW:	*EBI:*	*Peer assessed by:*

Read the article below. You will be quizzed next lesson:

HCI (human-computer interaction) is the study of how people interact with computers and to what extent computers are or are not developed for successful interaction with human beings.

As its name implies, HCI consists of three parts: the user, the computer itself, and the ways they work together.

<u>User</u>

By "user", we may mean an individual user, a group of users working together. An appreciation of the way people's sensory systems (sight, hearing, touch) relay information is vital. Also, different users form different conceptions or mental models about their interactions and have different ways of learning and keeping knowledge and. In addition, cultural and national differences play a part.

<u>Computer</u>

When we talk about the computer, we're referring to any technology ranging from desktop computers, to large scale computer systems. For example, if we were discussing the design of a Website, then the Website itself would be referred to as "the computer". Devices such as mobile phones or VCRs can also be considered to be "computers".

<u>Interaction</u>

There are obvious differences between humans and machines. In spite of these, HCI attempts to ensure that they both get on with each other and interact successfully. In order to achieve a usable system, you need to apply what you know about humans and computers, and consult with likely users throughout the design process. In real systems, the schedule and the budget are important, and it is vital to find a balance between what would be ideal for the users and what is feasible in reality.

The Goals of HCI The goals of HCI are to produce usable and safe systems, as well as functional systems. In order o produce computer systems with good usability, developers must attempt to:

- understand the factors that determine how people use technology
- develop tools and techniques to enable building suitable systems
- achieve efficient, effective, and safe interaction
- put people first

H/W6 Firework Skills

Making a banner

Create a step by step guide on how to create a banner on Adobe Fireworks. make sure you review the steps as homework. You will be tested on your practical skills next lesson.

Checked by teacher:

H/W7 Firework Skills

Making an **animated** banner

Create a step by step guide on how to create an animated banner on Adobe Fireworks. Make sure you review the steps as homework. You will be tested on your practical skills next lesson.

Checked by teacher:

Making a **Button/Rollover**

Create a step by step guide on how to create an animated banner on Adobe Fireworks. Make sure you review the steps as homework. You will be tested on your practical skills next lesson.

Checked by teacher:

H/W**9 Firework Skills**

Making an **Adobe Flash Animation**

Create a step by step guide on how to create a small animation on Adobe Fireworks. Make sure you review the steps as homework. You will be tested on your practical skills next lesson.

Checked by teacher: