# Unit R050: IT in the digital world. Topic Area 1 & 2 : Design tools

## 1.1Types of design tools:
- Flow charts
- Mind maps:
  - Library
  - Tunnel timeline
  - Presentation
- Visualisation diagrams
Wireframes

## 2.1The purpose, importance and use of HCI in application areas:
- Banking
- Embedded systems
- Entertainment
- Fitness
- Home appliances
- Retail

## 2.2 Hardware considerations:
- Display
  - Type
  - Size
- Resources
  - Memory
  - Processing power

## Advantages of design tools
**Flow charts**
- Useful for simple designs with a small number of tasks and decisions.
- They are easy to understand and don't require any specialist knowledge.
- They show the steps that need to be followed in order.

**Mind maps**
- Easy to add ideas
- Help focus on the ideas and connections between them, and show relationships between ideas.

**Visualization diagrams**
- easy to make.
- simple for most people to understand.
- Clearly show ideas, layout of documents.
- See layout before building a prototype.

**Wireframes:**
- Allow you to position and move information and graphics
- change element sizes.
- finalize design without details like font and colour, high fidelity can be used in testing process

## Disadvantages of design tools
**Flow chart:**
- They only show processes and decisions sequentially and don't show concurrent processes.
- They can become complicated if a lot of decisions need to be shown.
- They cannot be used to create visual designs.

**Mind maps:**
- Can be difficult for others to understand.
- The correct type of mind map needs to be used for the task at hand.

**Visualisation diagrams:**
- Can lack detail.
- Lack of technical details can cause issues, confusion and misinterpretation.

## 2.3 Software considerations:
- Operating system
- Digital platform
  - Database
  - Mobile App
  - Spreadsheet
  - Website

## 2.4 User interaction methods
Gesture, Keyboard, Mouse , Touch  Voice

## Types of software used to create design tools:

- **Word processors:** used to create flow charts
- mind maps
- low-fidelity wireframes.

**Desktop publishing software** used to create:
mind maps
 high-fidelity wireframes.
Visualisation diagram