Types of Definitions

What is a definition?

• A definition answers the question: “what is it”?
• A definition gives readers information about the meanings of terms and concepts.
• Providing definitions is important to ensure that readers understand the concept as you intend (words can have multiple meanings).
When to provide definitions?

- Always define **new terms** and concepts.
- Define terms you use in a **non-standard** way.
- Define the terms you use if you are **unsure** readers will understand them.
- **The less readers know** about the topic, **the more you need to explain** the terms using language they can understand.

Types of definitions

1. Parenthetical definition
2. Sentence definition
3. Extended definition
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1. Parenthetical definition
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Parenthetical definition

A parenthetical definition explains a term briefly in parenthesis or between commas using synonyms or examples.

A term (definition)
A term, definition,

Virtual Machine Monitor (VMM)
Virtual Local Area Networks (VLANs)
A USB flash drive, also known as a USB drive, is a ...
Parenthetical definition

Virtual Machine Monitor (VMM) ...

A hosted VMM sits alongside or above a host operating system above the hardware, and may share drivers from the host operating system to handle Input/Output (I/O). This cooperative model results in a VMM system that does not require hardware-specific drivers for VMM I/O operations, and allows the use of virtual machines within an existing environment.

... The use of these technologies for virtualization offers a better level of CPU equivalence, and when combined with other technologies that can assist virtualization such as I/O Memory Management Units (IOMMU) (which handle VM memory to physical mappings in hardware)


Common phrases used in parenthetical definitions

e.g. = exempli gratia = for example, for instance

such as = for example

including = for example.
1) There are several cases, but here are a few ...
2) Highlighting an important example not to be forgotten.

i.e. = id est = that is, in other words
In light of this, many mobile computing researchers have tried to shield the mobility and make frequent disconnection transparent to end-users (e.g., the Coda file system [SKM+93] and Mobile IP [PJ96] work).

Any reliance on the user to explicitly provide contextual information, such as in Office Assistant projects, proves to be obtrusive and inconvenient for the user.

An entity is a person, place, or object that is considered relevant to the interaction between a user and an application, including the user and applications themselves [DA99].

The system concentrates on providing a set of tools to assist in the fieldworker’s observation and data-collection activities, i.e., helping the user record information about their environment.

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Sentence definition

A typical, good sentence definition consists of three elements:

1. Term = object / concept to be defined
2. Class = group to which the thing belongs
3. Characteristics = specific details that separate it from others in the same class.
### Sentence definition

<table>
<thead>
<tr>
<th>TERM</th>
<th>=</th>
<th>CLASS</th>
<th>+</th>
<th>CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A car</td>
<td>is</td>
<td>a motor vehicle</td>
<td>that</td>
<td>is used for transporting passengers.</td>
</tr>
<tr>
<td>A media player</td>
<td>is</td>
<td>an electronic device</td>
<td>which</td>
<td>can be used to store, transfer, and play back digital media, such as mp3 files and various video clips.</td>
</tr>
<tr>
<td>A house mouse</td>
<td>is</td>
<td>a small rodent</td>
<td>that</td>
<td>lives in a tiny hole and eats cheese.</td>
</tr>
<tr>
<td>An optical mouse</td>
<td>is</td>
<td>a pointing device</td>
<td>that</td>
<td>functions by detecting two-dimensional motion relative to its supporting surface.</td>
</tr>
<tr>
<td>A CEO</td>
<td>is</td>
<td>a person</td>
<td>who</td>
<td>is in charge of a corporation.</td>
</tr>
<tr>
<td>A university</td>
<td>is</td>
<td>an organization</td>
<td>where / in which</td>
<td>research and teaching is performed by scientists</td>
</tr>
</tbody>
</table>

### Example 1: sentence definition

A context-aware network is a form of computer network that is a synthesis of the properties of dumb network and intelligent computer network architectures.

**Identify the following elements:**

1. Term
2. Class
3. Characteristics

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Example 2: sentence definition

An operating system (OS) is system software that manages computer hardware and software resources and provides common services for computer programs.

Identify the following elements:

1. Term = object / concept to be defined
2. Class = group to which the thing belongs
3. Characteristics = specific details that separate it from others in the same class.

Example 2: sentence definition

An operating system (OS) is system software that manages computer hardware and software resources and provides common services for computer programs.

Identify the following elements:

1. **Term** = object / concept to be defined
2. **Class** = group to which the thing belongs
3. **Characteristics** = specific details that separate it from others in the same class.


Superordinates

Umbrella terms that can stand for an entire class or category of things.

Typical superordinate terms:

<table>
<thead>
<tr>
<th>Option</th>
<th>Benefit</th>
<th>Technique</th>
<th>Reason</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative</td>
<td>Advantage</td>
<td>Method</td>
<td>Rationale</td>
<td>Stage</td>
</tr>
<tr>
<td>Example</td>
<td>Drawback</td>
<td>Strategy</td>
<td>Consequence</td>
<td>Step</td>
</tr>
<tr>
<td>Criterion</td>
<td>Problem</td>
<td>Approach</td>
<td>Effect</td>
<td>Effect</td>
</tr>
<tr>
<td>Feature</td>
<td>Issue</td>
<td>Solution</td>
<td>Motivation</td>
<td>Procedure</td>
</tr>
</tbody>
</table>
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Extended definition

Extended Definitions usually begin with a sentence definition. What other information can be added to extend your definition?
## Extended definition

Eight Methods for extending your definition:

<table>
<thead>
<tr>
<th>Method</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Analysis of parts</td>
<td>What are its parts? classes? types?</td>
</tr>
<tr>
<td>5. Operating principles</td>
<td>How does it work?</td>
</tr>
<tr>
<td>6. Applications / Examples</td>
<td>How is it used or applied?</td>
</tr>
<tr>
<td>4. Analogy/ Comparison</td>
<td>Is it similar to something familiar?</td>
</tr>
<tr>
<td>5. History</td>
<td>What is its origin? Who developed it?</td>
</tr>
<tr>
<td>6. Advantages/ problems</td>
<td>What is needed to make it work?</td>
</tr>
<tr>
<td>7. Requirements</td>
<td>What does it look like? What are its</td>
</tr>
<tr>
<td>8. Physical appearance/ features</td>
<td>characteristic features?</td>
</tr>
</tbody>
</table>