Pick two of the terms below and explain how core technologies like CSS, XHTML, and XML (and, by extension, content standards like DITA and content management systems that make use of these core technologies) raise questions about the terms’ meaning:

- Authorship
- Literacy
- Text
- Document
- Writing
- Reading
- User
- Interface
- Web Page

Defining Document
A composite of text elements ultimately constitutes a document, conceived to be the unit of text communication. (Document Architecture and Text Formatting, peels)

A document is a:

- Logical structure
- Medium of communication of different information
- Record in detail
- Is a representation of a person's thinking by means of symbolic marks

A document is defined as a material reproduction of the author's thoughts. The document's prime objective is to transmit, communicate and store these thoughts as accurately as possible, regardless of the medium used for these concepts. (Document Architecture and Text Formatting, peels)

Defining Writing
A History of Writing by Steven Roger Fischer argues that "No one definition of writing can cover all the writing systems that exist and have ever existed.” Instead he states that a ‘complete writing’ system should fulfill the following criterion:

- Complete writing must have as its purpose communication
- Complete writing must consist of artificial graphic marks on a durable or electronic surface
- Complete writing must use marks that relate conventionally to articulate speech (the systematic arrangement of significant vocal sounds) or electronic programming in such a way that communication is achieved

The following dialogue between a Senior Technical Writer (experienced in DITA/XML authoring) (Senior TW) and an editor-turned Technical Writer (New TW) illustrates how XML, CSS, XHTML, Content Management Systems (CMS), etc. changed the way we create Documents and the way we author (Writing) them.

New TW: What tool are we using for this project?
Senior TW: We have moved completely to XML authoring environments. So we are using an XML-based authoring tool called Epic Editor.

New TW: I opened an XML document in Epic Editor and found that there are a lot of instructions marked in yellow. What am I supposed to do with these? Can I replace all these instructions in the document with my own content?

Senior TW: You have to read all the instructions and tailor your content accordingly. Consider the following snippet:
<itemizedlist>
   <listitem><para>[example] Microsoft Cluster Server</para></listitem>
   <listitem><para>[example] Windows NT SP1</para></listitem>
   <listitem><para>[example] Third-party backup software</para></listitem>
</itemizedlist>

Here you need to replace only the [example] part marked in yellow and add your own text.

New TW: What if I want to create my own structure and organize the text differently? Maybe I can do it better.

Senior TW: Structural modifications have to be approved by the organization’s standards body. Modifications have to go through a strict audit process before they are approved and incorporated. Till that happens we have to strictly follow the predefined structure so as to adhere to our organization specific standards. Document structure is enforced by DTD. It also defines all the elements and its properties.

New TW: I see. I feel the guide name mentioned in the title page and the way text is represented in the table is inappropriate. Can I change the guide name?

Senior TW: You can put across this information to the steering committee. But you cannot change the guide name or the table properties now. You have to go with what is mentioned. If you change the name the XML transformation process will throw an error and so will the CMS where we have to check the document in.

New TW: Oh 😞! I was thinking of making some changes in style...some formatting...can I?

Senior TW: Do not make any changes to the existing document styling. The styling is defined in XML style sheets and mapped to the document.

New TW: I tried adding note and tip tags to the document, but the tool is not allowing me to do so. What shall I do?
**Senior TW:** You cannot add tags randomly. The structure specified in DTD has to permit the tags. For example the note and tip tags are part of the para tag. So you cannot apply the note or tip tag to any element other than the para tag.

**New TW:** I have been told that my audience are end-users (basic computer literate) and marketing people. I suppose this is an end-user guide. Can I design my own layout/structure when I write the guide for the marketing people?

**Senior TW:** You just have to write one document. From that we will generate both end-user manual and marketing brochure and in future, online help documents. Technologies like XSLT help us achieve this generality.

**New TW:** But I believe that I have two sets of audience. How can I have same information product for both end-user and marketing people?

**Senior TW:** You have to understand that the information product is not just a “document”. In the world of DITA technical writers/information developers no longer create documents. They create a collection of information objects. They are then reused and repurposed into diverse information products.

**New TW:** Well I guess then Technical Writers should have skills on DITA, XML, CMS, XSLT, etc. apart from “writing”.

The following table shows the inference drawn from the above conversation on Document and Writing.

<table>
<thead>
<tr>
<th>Document and Writing</th>
<th>Area of Investigation and Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Who is the author of the document?</strong></td>
<td>• Writers should be aware of reuse methodologies.</td>
</tr>
<tr>
<td>With the advent of XML, CMS there is no sole author for a document or manual. Writing is shared among different writers present locally or globally.</td>
<td>• More than one writer should not spend time writing the same content.</td>
</tr>
<tr>
<td><em>Multiple writers at multiple locations contribute to a document database which then, on reader request, dynamically generates a unique document fulfilling current reader needs. What the reader sees is not a document that an editor has carefully groomed, but rather a dynamic document that was compiled from a database just before the information is presented</em></td>
<td>• Writers should not operate in “silos”</td>
</tr>
<tr>
<td>- (Albers 2000p. 191) (From W. Hart Davidson on Core Competencies of Technical Communication)</td>
<td>• All the writers should perform routine check-in to the CMS.</td>
</tr>
<tr>
<td></td>
<td>• Writers should check-out content objects from CMS before updating any content object</td>
</tr>
<tr>
<td></td>
<td>• Managers should generate weekly reports to determine whether the team is following the daily check-in/check-out standard.</td>
</tr>
</tbody>
</table>
Can I create my own document structure?

XML document structure is pre-defined (by DTD). Therefore, author can no more control the document structure and indulge on free flow of writing.

In other words an author no more writes the complete document. He shares his “writing” with other authors. He writes content objects for various users and information products. So no single author can own up to be the author of the document. They are now the “contributors” of the information product.

• When implementing DITA authors should be educated first.
• Authors should be trained on “structured writing”, rendering information.

Structured writing follows standards - Rockley

• Authors should be made aware of how DTD influences the structure of the document.

DTD demands a strict hierarchy - Technical Communication, Knowledge Management, and XML (Applen)

• Authors should be made aware that they need to create XML document (.xml) which contains only marked up data and no information of “rendition”. They should be trained on the concepts of DTD and XSLT.

All my chapter titles are formatted automatically. How can I control the styling and formatting of my document?

The core concept of XML-based publishing is separation of content and format. Styling information is all embedded into an XML style sheet.

Style sheets may totally reorder the content elements of an XML document; they may insert additional text, graphics, or even multimedia objects into a document; and they may attach programs (scripts) to document objects to make them interactive. - Object-orientation, Visual Language, and XML (Johnsen)

• Author should be aware of the mapping of DTD, XSLT and the .xml document.
• Author should be aware that formatting cannot be done directly on the text of a document. Unlike authoring in the unstructured environment.

The manual I am working on is used as an end-user guide, quick reference guide and support manual. How can that be?

An information product is a collection of reusable content objects. Single-sourcing and reuse are the core of XML authoring. A collection of selected content objects not only creates a new information product but also generates different output (PDF, HTML).

XSLT style sheets transform XML documents into new information structures in XML or other

• Care should be taken when reusing a content object. It should be relevant to the product and its version.
• Authors should sync up with each other and discuss the latest available content objects.
• Preferably, before reusing any element author should check-out the latest and most updated content object from CMS.
• Author should use the appropriate XSLT available for a particular output.
• Author should be aware of reuse strategy and the “logic” used in designing the information model of the CMS.
- Object-orientation, Visual Language, and XML (Johnsen)

- Author should interact with Information Architect/type architect from time to time and offer findings and suggestions on the reuse policy and CMS.