



# Markup language

**any system of distinguishing one segment of text from other segments**

- System for annotating a document in a way that is (syntactically) **distinguishable from the text**.
- Evolved from "marking up" manuscripts written with a red or blue pencil on authors' papers.
- The "blue pencil instruction text" was replaced by **tags**, which indicate what the **parts of the document** are, rather than details of how they might be shown on some display.



# Types of MarkUp Language

- **Presentational** markup: Used by traditional word-processing systems: Binary codes embedded within document text that produce the "**what you see is what you get**" effect. Such markup is usually hidden from users
- **Procedural** markup: embedded in text and provides **instructions** for programs that are to process the text. Well-known examples include troff, TeX, and PostScript.
- **Descriptive** markup: **Label** parts of the document rather than to provide specific instructions as to how they should be processed. Well-known examples include LaTeX, HTML, and XML. The objective is to decouple the inherent structure of the document from any particular treatment or rendition of it. **Such markup is often described as "semantic".**



# HTML

- Hyper Text Markup Language
- HTML describes the structure of Web pages (**using markup**)
- HTML elements (**=tags**) are the building blocks of HTML pages
  - label pieces of content such as "heading", "paragraph", "table", etc.
- Browsers **do not display** the HTML tags, but use them to render the content of the page



# XML

- Markup language (like HTML)
- XML stands for eXtensible Markup Language
  - **Class: why eXtensible?!**
- XML was designed to store and transport data
  - cares about **what** the data is (wink!)
- XML was designed to be self-descriptive
- Both human- and machine-readable



GOTO <http://dbpedia.org/sparql>

- [] => will visit at a later time
- a => rdf:type

← → ↻ ⓘ Not secure | dbpedia.org/sparql

### Virtuoso SPARQL Query Editor

Default Data Set Name (Graph IRI)  
http://dbpedia.org

Query Text  
`select distinct ?Concept where {[] a ?Concept} LIMIT 100`



## Exercise 4

Find Giannis Antetokounmpo's draft team



# Find G.A.'s draft team

```
SELECT ?team
```

```
FROM <http://dbpedia.org/data/Giannis\_Antetokounmpo>
```

```
WHERE {
```

```
    dbr:Giannis_Antetokounmpo dbo:draftTeam ?team .
```

```
}
```