

Week 01

Introduction to Software Design  
Project-1

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# Outline

- **Grading Policy**
- **Academic Honesty**
- **Introduction to the Course**
- **What is web engineering?**
- **Web applications**
- **Synopsis/Project Proposal**
- **HTML Basics**

# Grading Policy

## Classification

Assignments & Quizzes	10 Marks
Attendance & Class Behavior	10 Marks
Mid-term Exam	20 Marks
Final-term Exam	40 Marks
Semester Project & Report	20 Marks
Total	100 Marks

# Academic Honesty

- Your work in this class **must** be your own
- If students are found to have collaborated excessively or to have cheated (e.g. by copying or sharing answers during an examination), all involved will at a minimum receive grades of “0” for the first violation
- Further violations will result in failure in the course

# Few Things to Remember

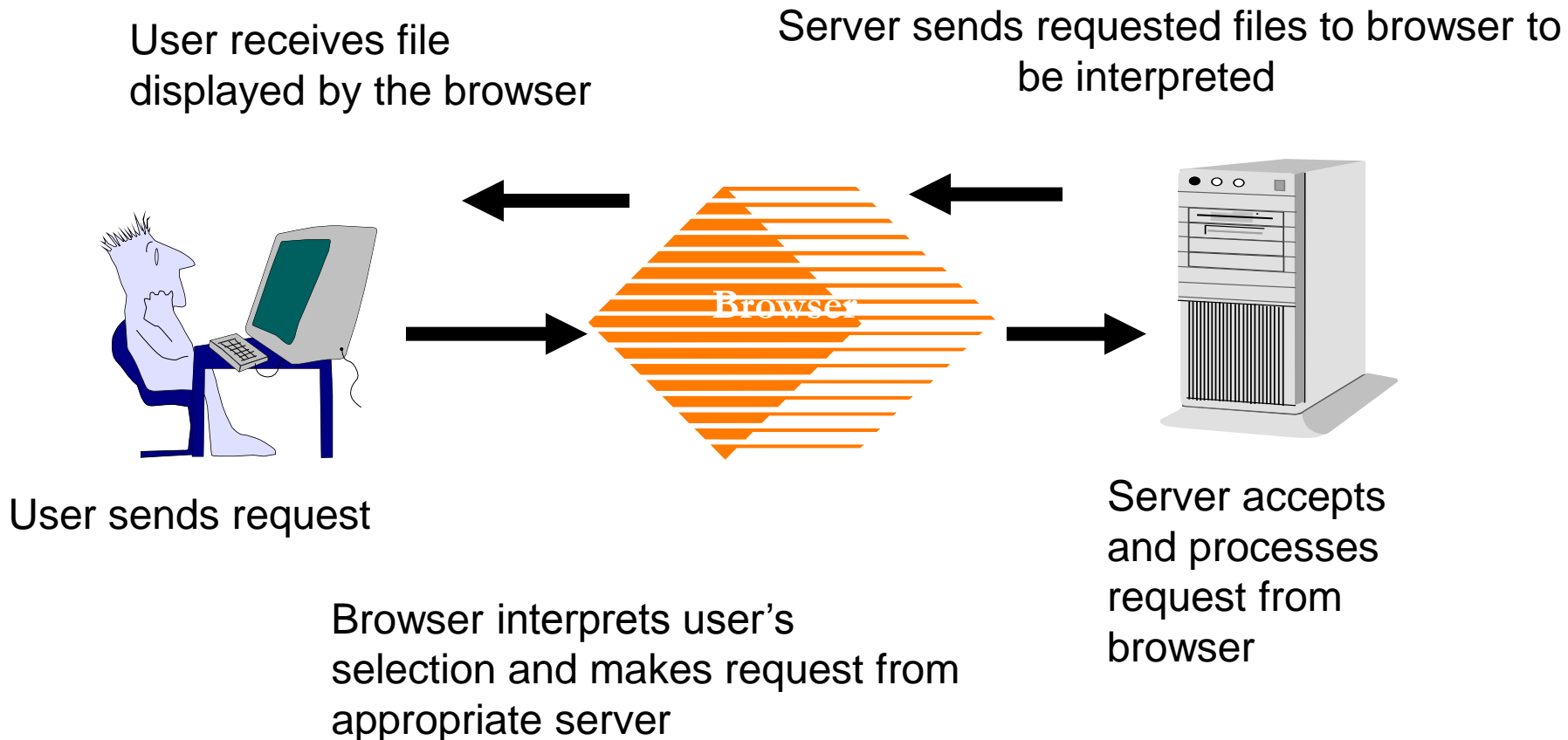
- Attendance will be taken within 5 minutes at the start of class
- Students are allowed to enter into class within 15 minutes at the starting of class
- **Zero tolerance policy** on attendance, discipline of class during lectures!
- Assignments must be submitted on time, no late submissions
- In case of copied assignment both parties will be given **zero!**
- Projects, Presentation, Quizzes, Assignments, Class participation are very important.
- Don't miss your Classes, Quizzes, Presentations, Assignments and Projects!

# 1. Introduction to the Course

**This course aims:**

- To introduce the **methods** and **techniques** used in Web-based application development
- To **develop** practical web applications
- How to **document** your projects
- Report and Thesis **Writing**

# 1.1 Web application development



## 1.2 Web application development...

- **Hyper-text Markup Language (HTML)**
- **Cascading Style-sheets (CSS)**
- **Client-side Scripting Language (JavaScript)**
- **Serve-side Scripting Language (PHP)**
- **Database Language (MySQL)**



# 1.3 Books & Resources

- **Visit:**

<http://www.mubashirali.com/software-design-project/>

## 2. Web engineering

- **Software engineering** is an engineering discipline that is **concerned** with all aspects of **software production**
- **Software Engineering** is the science and art of **building** significant software systems that are:
  - on time
  - on budget
  - with acceptable performance
  - with correct operation

## 2. Web engineering...

- **Web engineering** is the study of the process, used to **create** high quality **Web-based applications**
- Web engineering **draws** heavily on the **principles and management** activities found in software engineering processes
- Web engineering **extends** Software Engineering to Web applications

## 2. Web engineering...

- The application of **systematic and quantifiable** approaches to cost-effective analysis, design, implementation, testing, operation, and maintenance of high-quality web applications

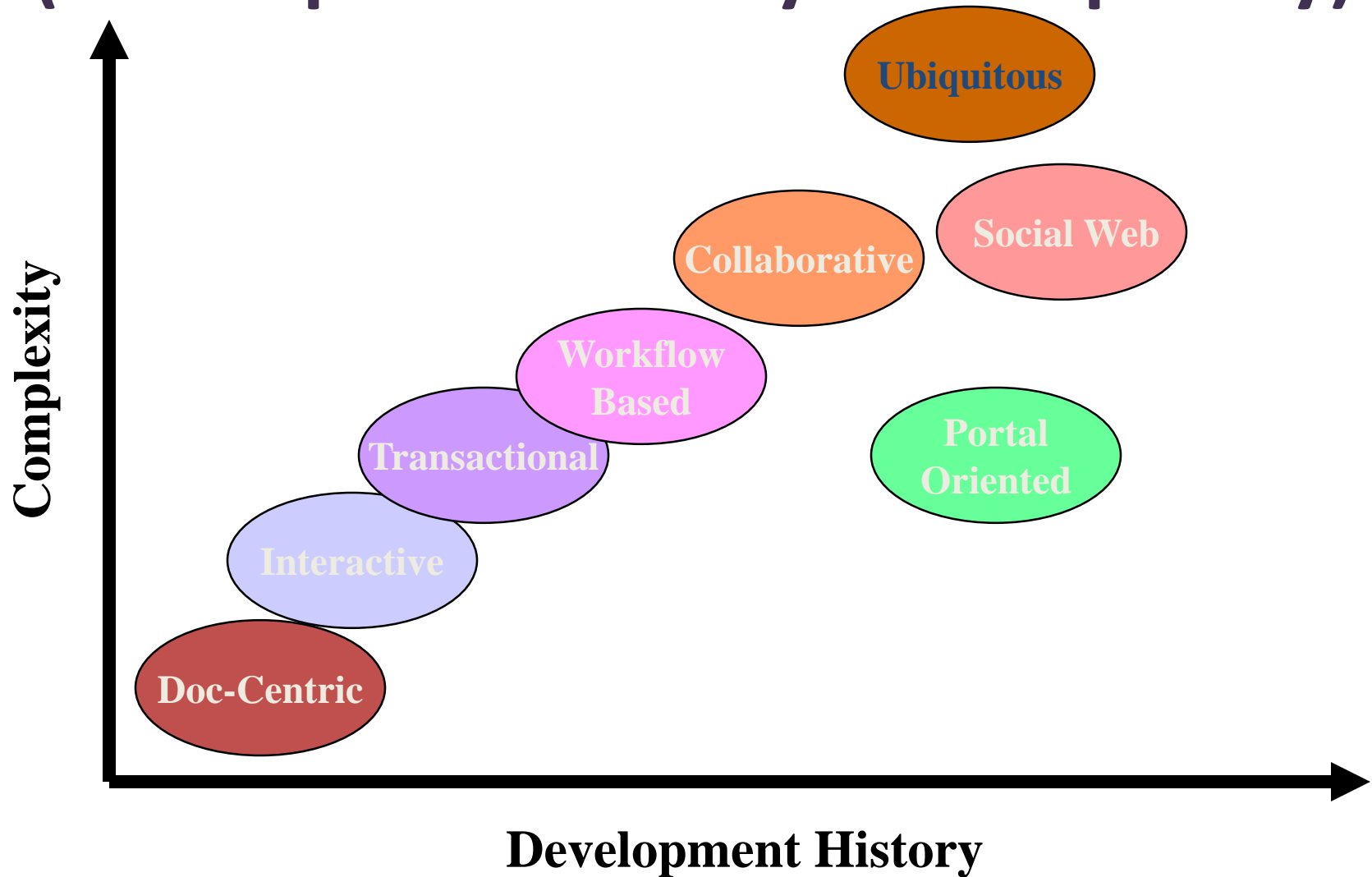
# 3. Web applications

- **WWW** has massive and permanent influence on our lives
  - Economy, Industry, education, healthcare, entertainment
- **Why?**
  - global and permanent
  - Comfortable and uniform access

# 3. Web applications...

- WWW started as an **informational medium**
- Evolved into **application medium**
  - Interactive, data intensive services
- Distinguishing factors
  - **How** it is used?
  - **Technologies and standards** for development

# 3.1 Categories of Web Applications (development history vs complexity)



# 4. Synopsis/Project Proposal

**What is Synopsis?**

**Ecommerce Project Case Study**

**Providing List of Project Ideas**

**Your Synopsis Must have following details**

- 1. Group No./ Student Name/ Roll No./ Email Add.**
- 2. Project Title/ Name**
- 3. Scope of Project/ Problem Identification & Solution**
- 4. Tools**



# Introduction to HTML...

- HTML – **Hyper-Text Markup Language** – The Language of Web Pages on the World Wide Web
- It defines the **structure** of webpages and **determines** how data is displayed online
- HTML is a text formatting language
- Is a set of special instructions that can be added in the text to add **formatting** and **linking information**
- Is directly interpreted by the **browser**

# 5. Introduction to HTML...

- **Hypertext:**
  - Allows for non-linear linking to other documents
- **Markup Language:**
  - Content is “marked up” or tagged to tell the browser how to display it
- HTML standards are developed under the authority of the World **Wide Web Consortium (W3C)**, headed by Tim Lee
  - <http://www.w3c.org>

# Introduction to HTML...

- HTML was created in **1991** by **Tim Berners-Lee** at CERN in Switzerland
- It was designed to allow scientists to display and share their research
- **1995- HTML 2**
- lots of browsers had added their own bits to HTML
- **Dan Connolly** and colleagues collected all the HTML tags that were widely used and collated them into a draft document

# Introduction to HTML...

- **1997- HTML 3.2**
- It was the first version developed and standardized exclusively by the W3C
- HTML 3.2 included the support for **applets, text flow around images, subscripts** and **superscripts etc**
- **1999 – HTML 4.1**
- extends HTML with mechanisms for **style sheets, scripting, frames** etc.
- **HTML5**

# Introduction to HTML...

- **HTML Tags:**
- Tags are instruction that are directly embedded into the text of the document
- Is a signal to a browser to do something before just throwing text on the screen
- Begin with open angle bracket **<** and ends with close angle bracket **>**
  - For example **<HTML>**
- **Paired Tags :** **<HTML> </HTML>**
- **Singular Tags:** **<BR>**

# Introduction to HTML...

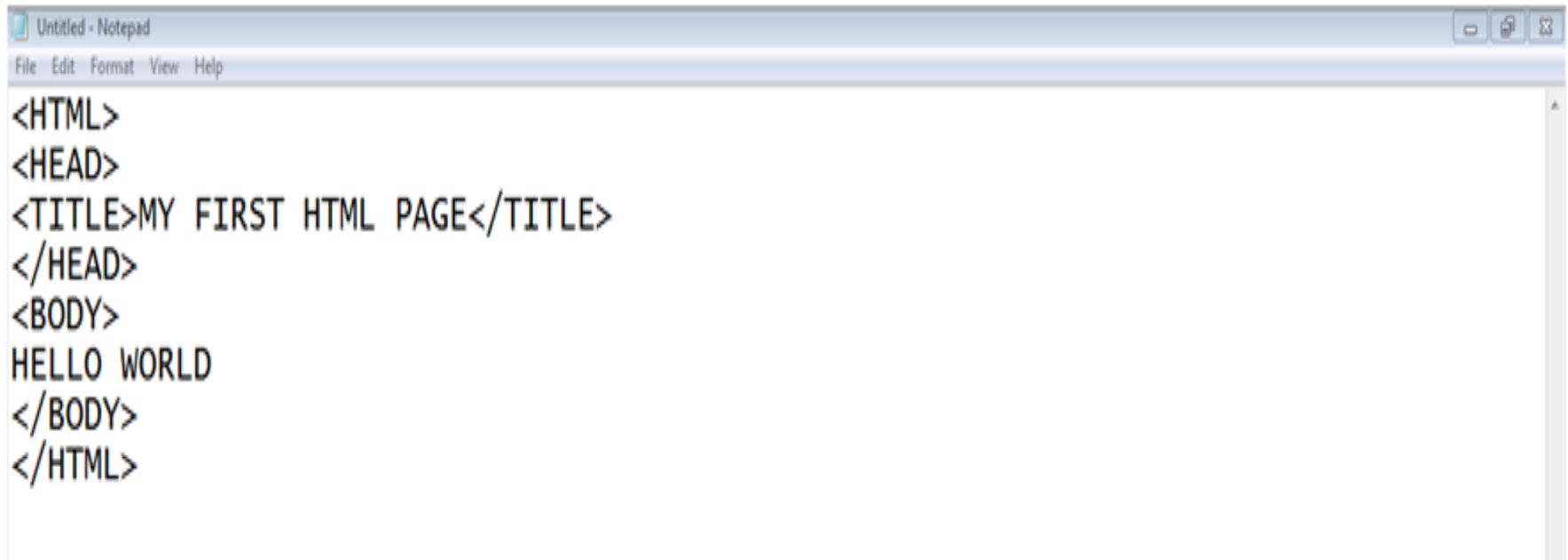
- HTML is not case-sensitive
- multiple spaces will appear as a single space
- Blank and new lines are ignored
- `<!-- comments -- >`
- HTML files have `.html` extension

# Structure of HTML Page

- The entire web page is enclosed within **<HTML>** and **</HTML>**
- Within these tags two distinct sections are created **head** and **body**
- **Head:** `<HEAD>`  
    `<TITLE> ..... </TITLE>`  
    `</HEAD>`
- **Body:** indicate the start and end of main body of textual information  
    `<BODY>`  
    `</BODY>`

# Structure of HTML Page...

- **First HTML page:**

A screenshot of a Notepad window titled "Untitled - Notepad". The window has a menu bar with "File", "Edit", "Format", "View", and "Help". The text inside the window is as follows:

```
<HTML>
<HEAD>
<TITLE>MY FIRST HTML PAGE</TITLE>
</HEAD>
<BODY>
HELLO WORLD
</BODY>
</HTML>
```



# The BODY Tag

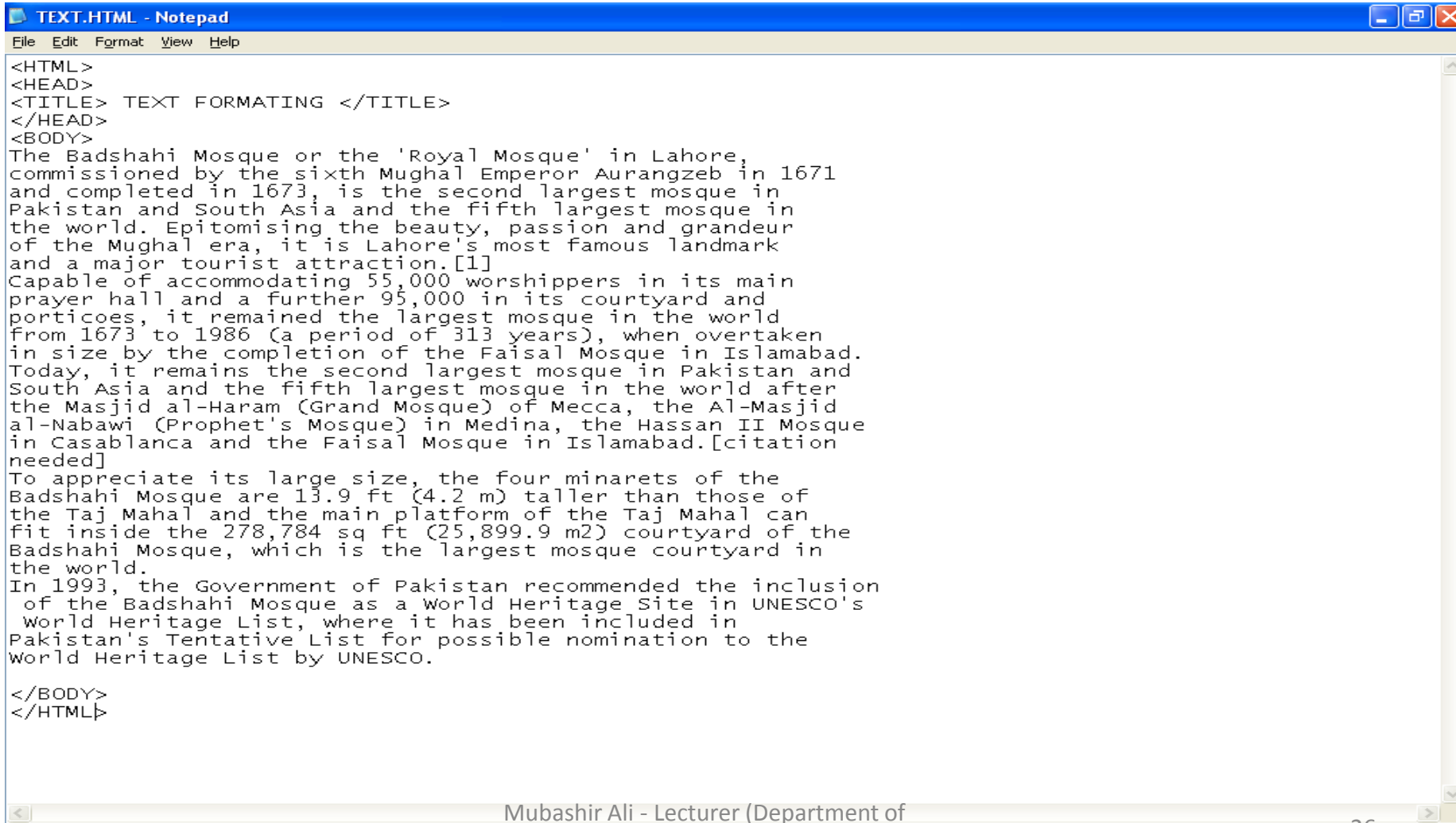
## Attributes:

- **BGCOLOR:** Change the background color
- **BACKGROUND:** Place an image at background
- **TEXT:** Change the color of the body text

## Example:

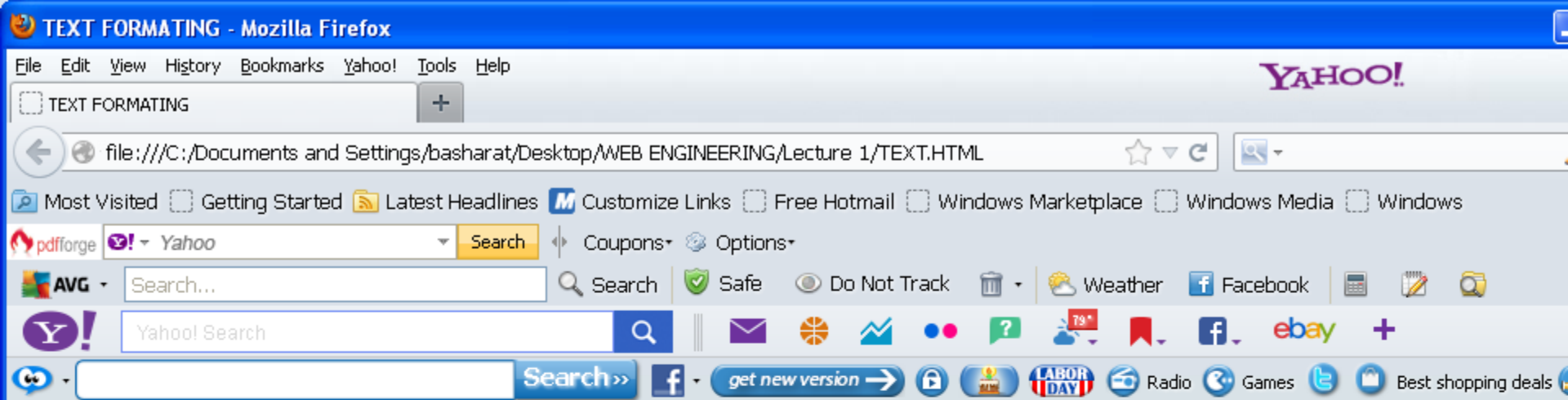
- `<BODY BGCOLOR=123345 TEXT=Red>`
- `<BODY BACKGROUND="img.jpg" TEXT=Red>`

# Formatting text



```
TEXT.HTML - Notepad
File Edit Format View Help
<HTML>
<HEAD>
<TITLE> TEXT FORMATING </TITLE>
</HEAD>
<BODY>
The Badshahi Mosque or the 'Royal Mosque' in Lahore,
commissioned by the sixth Mughal Emperor Aurangzeb in 1671
and completed in 1673, is the second largest mosque in
Pakistan and South Asia and the fifth largest mosque in
the world. Epitomising the beauty, passion and grandeur
of the Mughal era, it is Lahore's most famous landmark
and a major tourist attraction.[1]
Capable of accommodating 55,000 worshippers in its main
prayer hall and a further 95,000 in its courtyard and
porticoes, it remained the largest mosque in the world
from 1673 to 1986 (a period of 313 years), when overtaken
in size by the completion of the Faisal Mosque in Islamabad.
Today, it remains the second largest mosque in Pakistan and
South Asia and the fifth largest mosque in the world after
the Masjid al-Haram (Grand Mosque) of Mecca, the Al-Masjid
al-Nabawi (Prophet's Mosque) in Medina, the Hassan II Mosque
in Casablanca and the Faisal Mosque in Islamabad.[citation
needed]
To appreciate its large size, the four minarets of the
Badshahi Mosque are 13.9 ft (4.2 m) taller than those of
the Taj Mahal and the main platform of the Taj Mahal can
fit inside the 278,784 sq ft (25,899.9 m2) courtyard of the
Badshahi Mosque, which is the largest mosque courtyard in
the world.
In 1993, the Government of Pakistan recommended the inclusion
of the Badshahi Mosque as a World Heritage Site in UNESCO's
World Heritage List, where it has been included in
Pakistan's Tentative List for possible nomination to the
World Heritage List by UNESCO.

</BODY>
</HTML>
```



The Badshahi Mosque or the 'Royal Mosque' in Lahore, commissioned by the sixth Mughal Emperor Aurangzeb in 1671 and completed in 1673, is the second largest mosque in Pakistan and South Asia and the fifth largest mosque in the world. Epitomising the beauty, passion and grandeur of the Mughal era, it is Lahore's most famous landmark and a major tourist attraction. [1] Capable of accommodating 55,000 worshippers in its main prayer hall and a further 95,000 in its courtyard porticoes, it remained the largest mosque in the world from 1673 to 1986 (a period of 313 years), when overtaken in size by the completion of the Faisal Mosque in Islamabad. Today, it remains the second largest mosque in Pakistan and South Asia and the fifth largest mosque in the world after the Masjid al-Haram (Grand Mosque) of Mecca, the Al-Masjid al-Nabawi (Prophet's Mosque) in Medina, the Hassan II Mosque in Casablanca and the Faisal Mosque in Islamabad. [citation needed] To appreciate its large size, the four minarets of the Badshahi Mosque are 13.9 ft (4.2 m) taller than those of the Taj Mahal and the main platform of the Taj Mahal can fit inside the 278,784 sq ft (25,899.9 m<sup>2</sup>) courtyard of the Badshahi Mosque, which is the largest mosque courtyard in the world. In 1993, the Government of Pakistan recommended the inclusion of the Badshahi Mosque as a World Heritage Site in UNESCO's World Heritage List, where it has been included in Pakistan's Tentative List for possible nomination to the World Heritage List by UNESCO.

# Formatting text...

- **<P>..... </p>**: starts a new paragraph
  - Align (left, right, center and justify)
- **<BR>**: gives an one line break
- **<H1> ..... </H1>**: heading
- **<HR>**: draws horizontal line
  - ALIGN (LEFT,CENTER,RIGHT)
  - SIZE=2
  - WIDTH=100%
  - color
- **Text Styles:**
  - **<B> .... </B> , <I> .... </I>, <U> .... </U>**

# Formatting text...

- **<CENTER>....</CENTER>**
- **<FONT>.....</FONT>**
  - **FONTFACE:** Sets the specified font name
  - **SIZE:** Size of the text (between 1 and 7)
  - **COLOR:** Set the color of the text
- **Example:**
  - **<FONT FONTFACE="COMIC SANS MS" SIZE=6 COLOR=RED> Welcome</FONT>**

# Lists in HTML

- **Un-ordered Lists:**

- Starting Tag `<UL>`, Ending Tag `</UL>`
- List Items `<LI>`
  - Type (FILLROUND, SQUARE)

- **Ordered Lists:**

- Starting Tag `<OL>`, Ending Tag `</OL>`
- List Items `<LI>`
  - Type (“1”, “A”, “a”, “I”, “i”)
  - Start (Alerts the numbering Sequence)
  - Value (Changes the number sequence in the middle of an ordered list)

# Lists in HTML...

- **Definition Lists:**
  - Starting Tag `<DL>`
  - Ending Tag `</DL>`
  - Definition Term `<DT>`
  - Definition Description `<DD>`

# Summary

- ✓ **Grading Policy**
- ✓ **Academic Honesty**
- ✓ **Introduction to the Course**
- ✓ **What is web engineering?**
- ✓ **Web applications**
- ✓ **Synopsis/Project Proposal**
- ✓ **HTML Basics**



# References

- Lecture Slides by Kappel et al.
- Chapter 1, Kappel, G., Proll, B. Reich, S. & Retschitzegger, W. (2006). Web Engineering, 1st ed. Hoboken, NJ: Wiley & Sons
- UNESCO ICTLIP Module 6. Lesson 1 Slides
- **Chapter 1**, Beginning HTML, XHTML, CSS, and JavaScript, by Jon Duckett, Wiley Publishing; 2009, ISBN: 978-0-470-54070-1.
- *<http://www.w3schools.com/html>*