The slide is titled "Session Overview" in a yellow font. It features a decorative graphic in the top left corner consisting of overlapping yellow and black squares. The main content is a bulleted list of three items, each preceded by a small square bullet. The slide has a yellow border on the right and bottom. The bottom of the slide contains a dark blue footer bar with white text on the left and right.

Session Overview

In this session, you will be able to:

- Explain advancements in the fields of images, animation, tools, hardware, and software that make up a Web design
- Explain the potential challenges in the field of Web design
- Identify suitable tips that will support Web design against future potential challenges

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Instruction(s) to the trainer:

- Begin the session by introducing students to advancements and potential challenges in the Web designing
- Conclude this screen by listing down the objectives of the session


Quick Tips:

Before commencing the session, let students express their views about advancements in Web



Introduction

- Print medium – static in nature and behaved as one-sided communication
- With developments in technology, Web revolutionized itself as a worldwide interface to find information, purchase goods and services, connect with people, and so on
- In the past, the interface platform ruled the Web and its design
- Today, engineers and designers have adopted responsive designs that remain consistent across all platforms

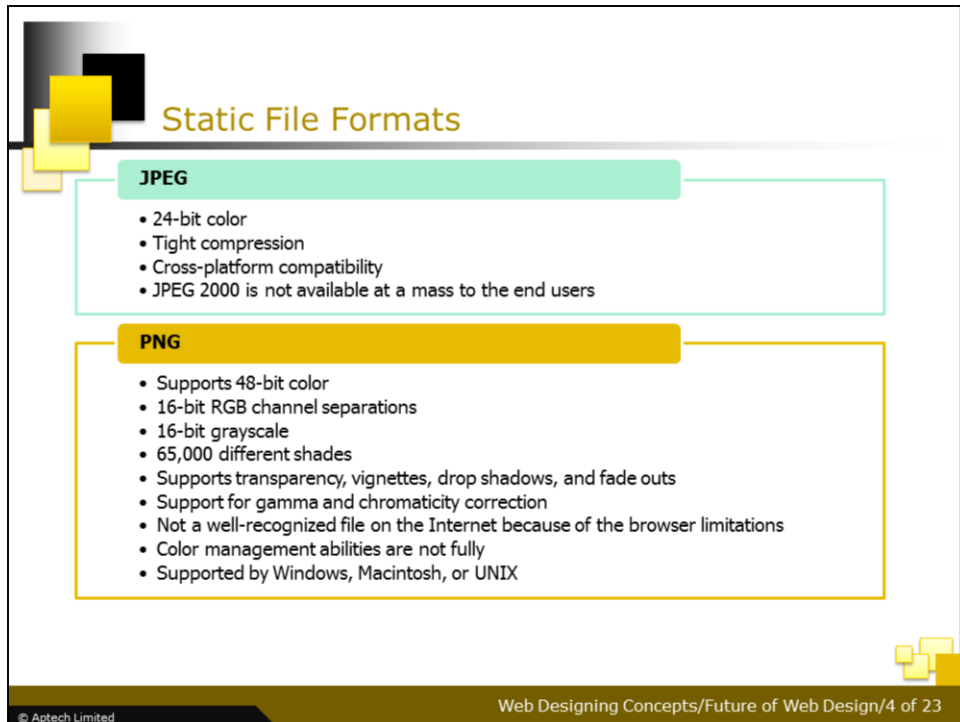


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Instruction(s) to the trainer:

- Explain briefly advancements from print medium to Web
- Explain how Web was developed



The slide is titled "Static File Formats" in a large, bold, orange font. It features two main sections: "JPEG" and "PNG". The "JPEG" section is highlighted with a light green background and lists four bullet points: "24-bit color", "Tight compression", "Cross-platform compatibility", and "JPEG 2000 is not available at a mass to the end users". The "PNG" section is highlighted with a yellow background and lists eight bullet points: "Supports 48-bit color", "16-bit RGB channel separations", "16-bit grayscale", "65,000 different shades", "Supports transparency, vignettes, drop shadows, and fade outs", "Support for gamma and chromaticity correction", "Not a well-recognized file on the Internet because of the browser limitations", and "Color management abilities are not fully". The slide also includes a footer with the text "© Aptech Limited" and "Web Designing Concepts/Future of Web Design/4 of 23".

Static File Formats

JPEG

- 24-bit color
- Tight compression
- Cross-platform compatibility
- JPEG 2000 is not available at a mass to the end users

PNG


- Supports 48-bit color
- 16-bit RGB channel separations
- 16-bit grayscale
- 65,000 different shades
- Supports transparency, vignettes, drop shadows, and fade outs
- Support for gamma and chromaticity correction
- Not a well-recognized file on the Internet because of the browser limitations
- Color management abilities are not fully
- Supported by Windows, Macintosh, or UNIX

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Instruction(s) to the trainer:

- Explain the two types of static formats: JPEG and PNG
- Discuss the features and limitations of both the formats




Animated Formats




MNG

- Patent-free status against UNISYS claim over GIF
- Independent colors by way of gamma, chromaticity, and ICC
- lossless compression
- moving sprites
- nested loops
- compatible with JPEG Network Graphics (JNG)



SVG

- can be rendered for display on a 96 a 300 dpi printer, without any quality compromise
- SVG vector image, rendered at 96 dpi can be put to a printer, and then added with the required bitmap effects
- Supports image panning and zooming
- Capable of producing bitmap type effects on vector images without using a bitmap editor




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Instruction(s) to the trainer:


- Explain the two types of animated formats: MNG and SVG
- Discuss the features and limitations of both the formats



Speed—Emergence of Broadband Technologies

Broadband technologies

- Cable
- DSL
- Satellite Communication
- Wireless Broadband
- Wireless cable




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Web Designing Concepts/Future of Web Design/6 of 23

Instruction(s) to the trainer:


- Discuss in detail various broadband technologies



Hardware

Major hardware advancements of recent times

- Advanced Micro Devices (AMD) released 1000 MHz CPU followed by Intel creating their own 1000 MHz chip
- 33 megabyte (MB) per second hard drive is being replaced with 66 megabyte per second drives
- 'Ultra 160 Small Computer System Interface (SCSI)' drives is replacing "Ultra-Wide SCSI" drives, giving 80 megabytes per second
- At the RAM front, the 'Bus Speed' is also increasing from 66 MHz to 100 MHz
- Beneficiaries of these advancements are the graphic designers




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Instruction(s) to the trainer:

- Discuss some of the major hardware advancements of recent times



Languages

- Hypertext Markup Language (HTML) will be the basic language of the Web for the future.
- Languages and coding technologies that enhance the abilities of HTML are likely to become more and more prevalent.



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Instruction(s) to the trainer:

- Explain the advancements in languages

Style Sheets

- Style sheets provides convenience to the designers.
- It can also be used to reassign any or all-existing HTML tags.
- It is also possible to overrule a style sheet element.

```
graph TD; HTML[HTML document] -- content --> Info[information]; Info --> CSS[CSS document]; CSS -- appearance --> UA[user agent eg browser]; UA --> User[user]; User --> HTML; HTML -- linked to --> CSS
```

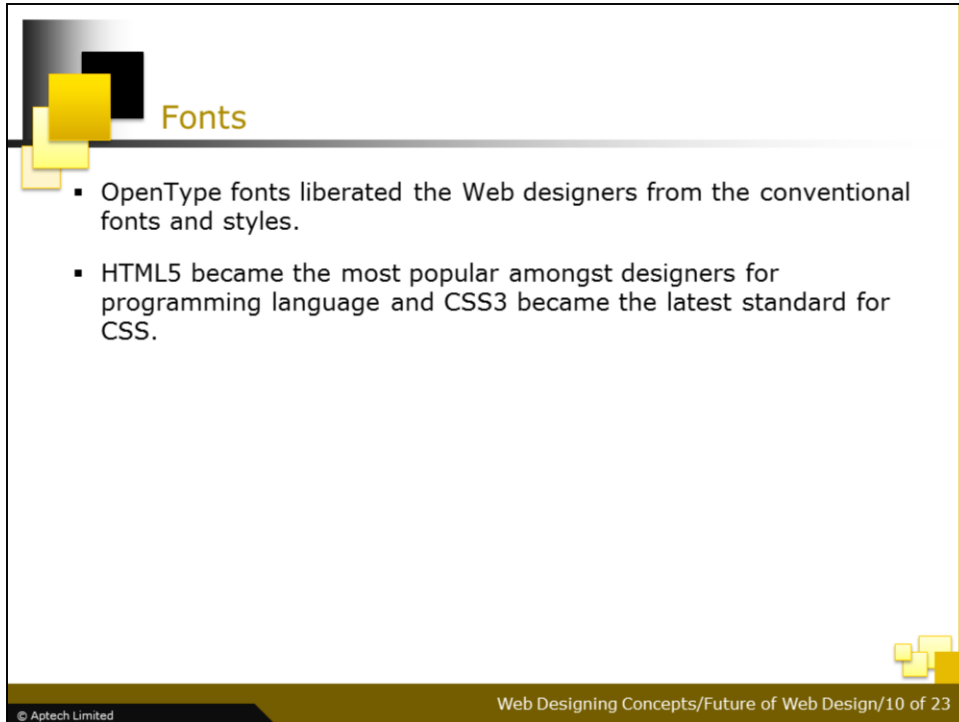
How style sheet works

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Instruction(s) to the trainer:

- Explain stylesheets and its features
- Explain how style sheets work



Fonts


- OpenType fonts liberated the Web designers from the conventional fonts and styles.
- HTML5 became the most popular amongst designers for programming language and CSS3 became the latest standard for CSS.

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Instruction(s) to the trainer:

- Talk about Open type fonts

A graphic in the top-left corner of the slide featuring a black square, a yellow square, and a smaller yellow square overlapping them.

XML

- It is designed specifically for structured data such as spreadsheets and databases.
- The texted information that appears in an open SVG file is actually created using XML.
- With the help of XML, information such as technical reports and financial data can be made private or public with a level of detail and accessibility.
- XML has introduced a new language to the world called SMIL.


A graphic in the bottom-right corner of the slide featuring a yellow square and a smaller yellow square overlapping it.

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Instruction(s) to the trainer:

- Explain XML and its advancement



SMIL

- SMIL stands for Synchronized Multimedia Integration Language.
- It can be used to synchronize playback of audio, video, text, and animation.
- It allows Web content such as sales presentations, training courses, and multimedia slide shows.
- It supports Streaming Audio and Video, which can be played simultaneously with its downloading.
- It is a simple, easy to use language, which can be edited using common text editors such as the Microsoft Notepad as well as SMIL editor itself.

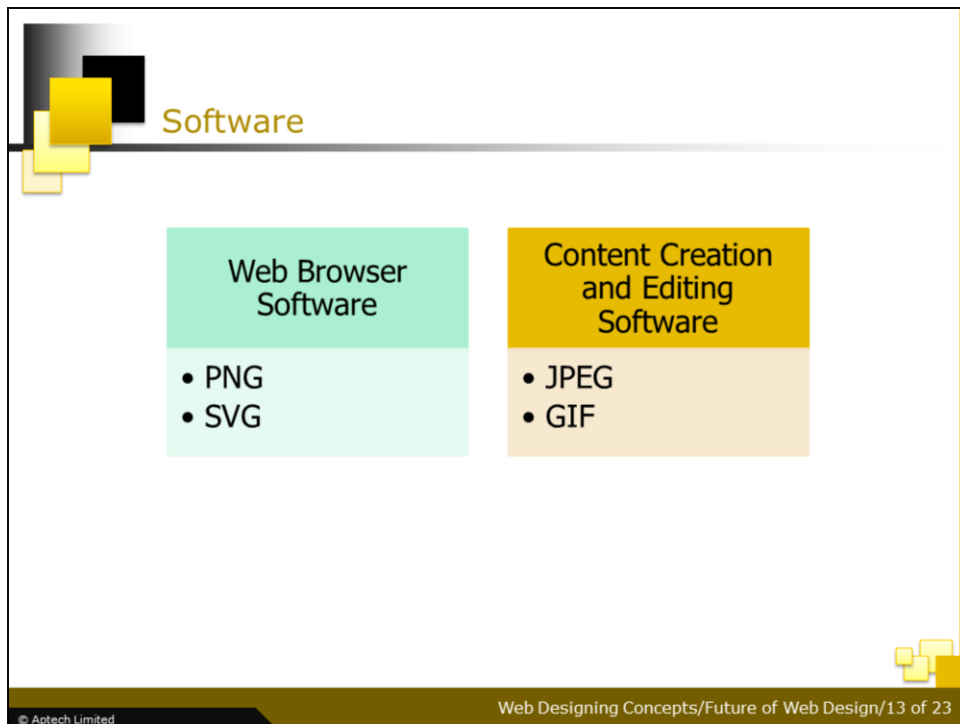


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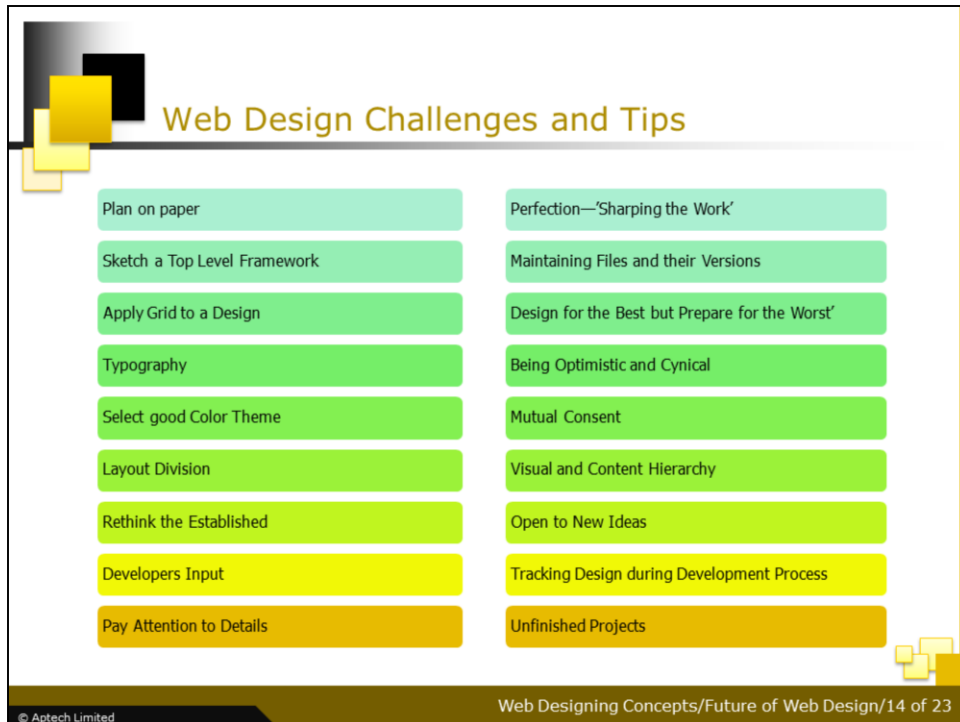
Instruction(s) to the trainer:

- Explain SMIL, what is it used for
- Describe various features of SMIL



Instruction(s) to the trainer:

- Discuss Web browser software and content creation software
- Explain how content creation software outpaced the Web browser software.
Provide example



The slide is titled "Web Design Challenges and Tips" in a bold, orange font. It features a decorative header with overlapping yellow and black squares. The content is organized into two columns of colored boxes, each containing a tip. The boxes transition from light green at the top to yellow and then orange at the bottom. A small graphic of overlapping squares is in the bottom right corner. The footer includes the copyright notice "© Aptech Limited" and the page information "Web Designing Concepts/Future of Web Design/14 of 23".

Web Design Challenges and Tips

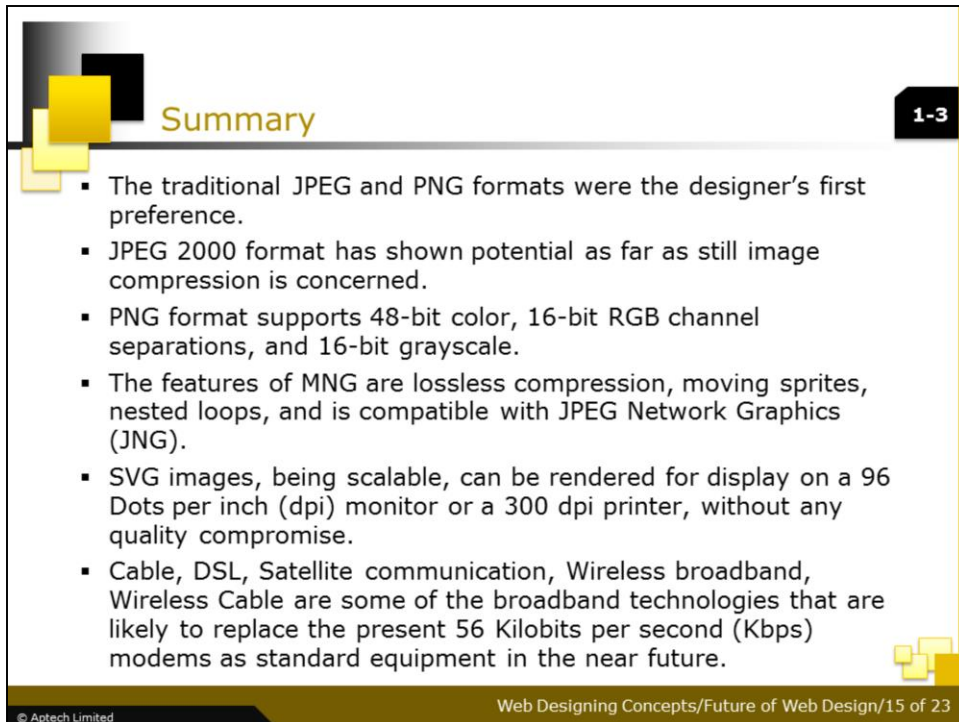
Plan on paper	Perfection—"Sharpening the Work"
Sketch a Top Level Framework	Maintaining Files and their Versions
Apply Grid to a Design	Design for the Best but Prepare for the Worst'
Typography	Being Optimistic and Cynical
Select good Color Theme	Mutual Consent
Layout Division	Visual and Content Hierarchy
Rethink the Established	Open to New Ideas
Developers Input	Tracking Design during Development Process
Pay Attention to Details	Unfinished Projects

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Instruction(s) to the trainer:

- Discuss various Web designing tips that can be used to overcome the challenges the designer might face while designing



Summary 1-3


- The traditional JPEG and PNG formats were the designer's first preference.
- JPEG 2000 format has shown potential as far as still image compression is concerned.
- PNG format supports 48-bit color, 16-bit RGB channel separations, and 16-bit grayscale.
- The features of MNG are lossless compression, moving sprites, nested loops, and is compatible with JPEG Network Graphics (JNG).
- SVG images, being scalable, can be rendered for display on a 96 Dots per inch (dpi) monitor or a 300 dpi printer, without any quality compromise.
- Cable, DSL, Satellite communication, Wireless broadband, Wireless Cable are some of the broadband technologies that are likely to replace the present 56 Kilobits per second (Kbps) modems as standard equipment in the near future.

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For Slides 15 to 17

Instructions to the trainer:


- Summarize the session
- Highlight the key points covered in the session
- Facilitate a group discussion, ask open-ended questions, in relation to the session that was conducted
- Invite responses from the participants



Summary


2-3

- Advanced Micro Devices (AMD) released 1000 MHz CPU, traditional 33 megabyte (MB) per second hard drive replaced with 66 megabyte per second drives, Ultra 160 Small Computer System Interface (SCSI) drives replaced with "Ultra-Wide SCSI" drives, Bus Speed increased from 66 MHz to 100 MHz are some of the major advancements in hardware.
- Languages and coding technologies that enhance the abilities of HTML are likely to become more and more prevalent.
- Style Sheet provides convenience to the designers. It can be used to reassign any or all-existing HTML tags.
- OpenType fonts liberated the Web designers from the conventional fonts and styles.
- XML shares similarity to HTML, but the former is much more powerful
- SMIL can be used to synchronize playback of audio, video, text, and animation.



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Summary

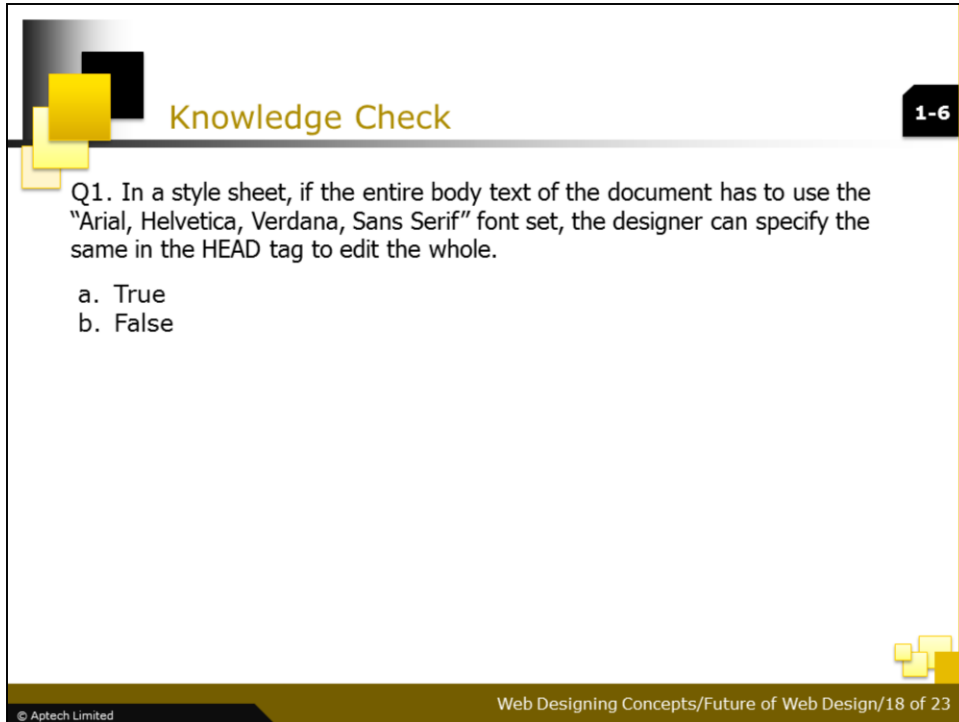
3-3

- To move in pace with the technological development, both the content creation software and the Web browser software competed. However, the content creation software outpaced the Web browser software.
- Principles and guidelines for Web designing have emerged after prolonged practice, client reviews, and user responses. However, with the changing scenario, new challenges often keep surfacing. These challenges can be overcome only when the Web designers tactfully manage their designs with respect to its users.



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A presentation slide titled "Knowledge Check" with a slide number "1-6" in the top right corner. The slide contains a question Q1 about CSS style sheets and a list of two options. The slide has a decorative header with overlapping yellow and black squares and a footer with a gold bar containing copyright and page information.

Knowledge Check 1-6

Q1. In a style sheet, if the entire body text of the document has to use the "Arial, Helvetica, Verdana, Sans Serif" font set, the designer can specify the same in the HEAD tag to edit the whole.


- a. True
- b. False

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Discuss Knowledge Check questions from slides 18 to 23

Answer(s):

- a. True




Knowledge Check

2-6

Q2. _____ fonts liberated the Web designers through the @fontface revolution.

- a. OpenType
- b. TrueType
- c. PostScript
- d. Print Font

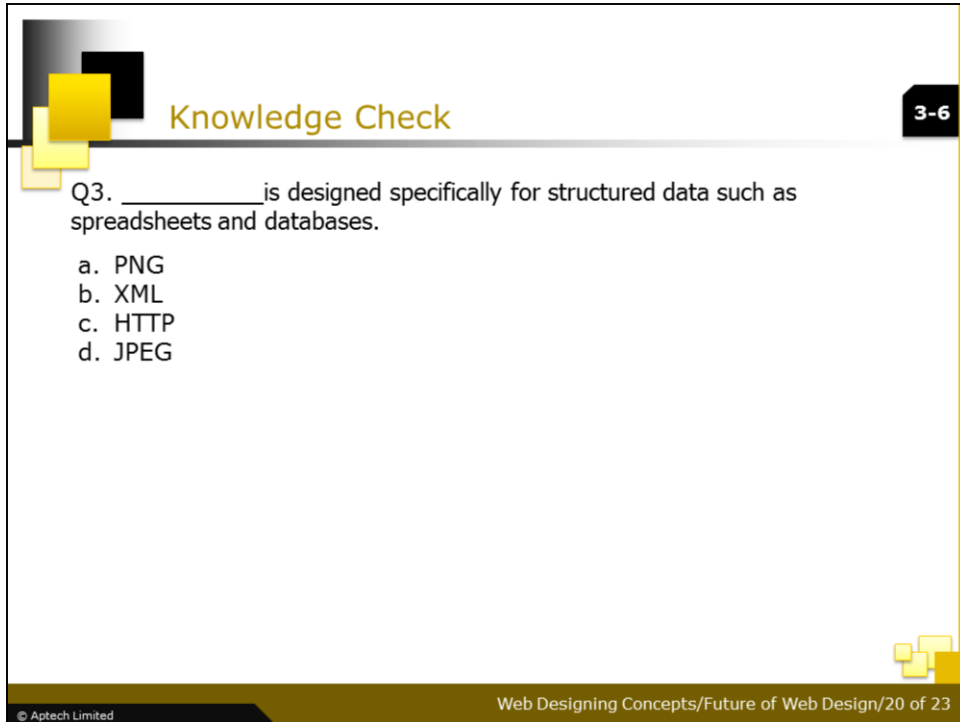


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Answer(s):

a. OpenType



Knowledge Check

3-6

Q3. _____ is designed specifically for structured data such as spreadsheets and databases.

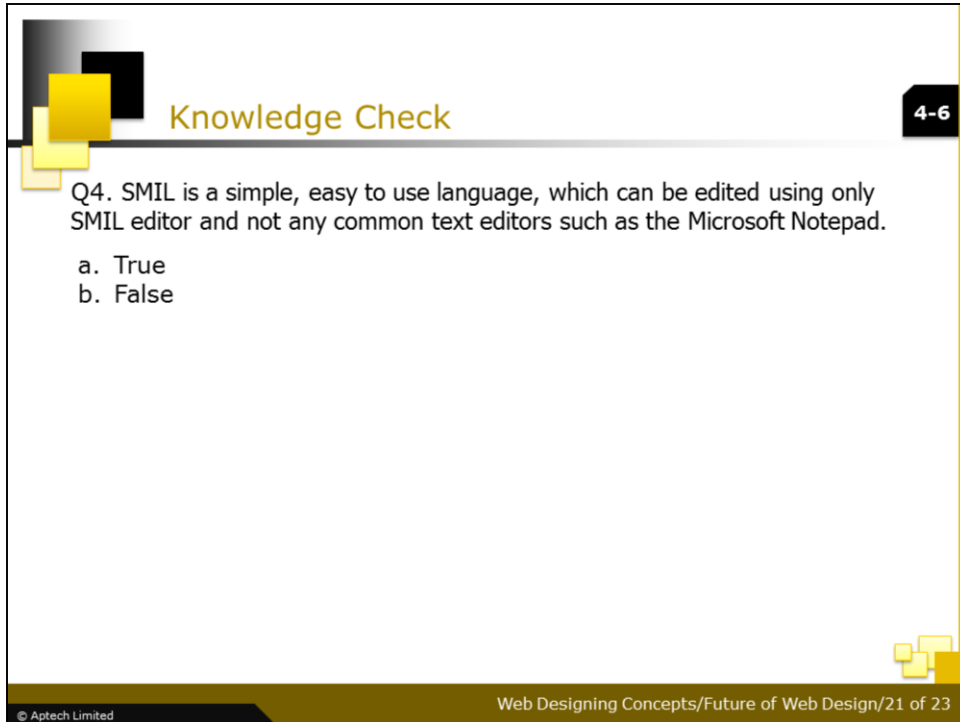
- a. PNG
- b. XML
- c. HTTP
- d. JPEG

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Answer(s):

b. XML



Knowledge Check 4-6

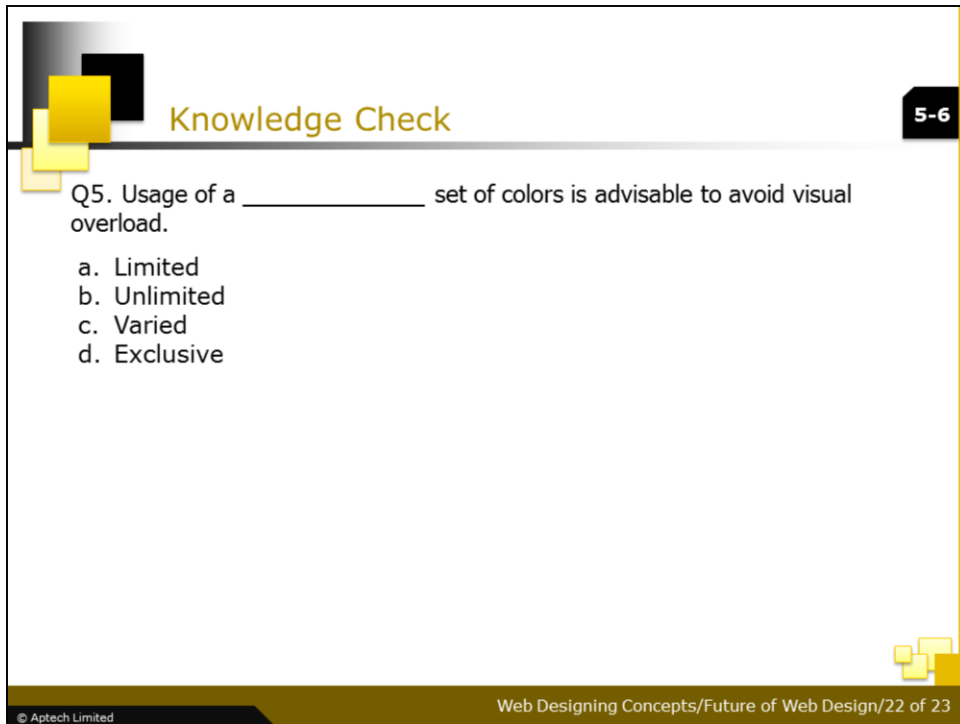
Q4. SMIL is a simple, easy to use language, which can be edited using only SMIL editor and not any common text editors such as the Microsoft Notepad.

- a. True
- b. False

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Answer(s):

d. False



Knowledge Check

5-6

Q5. Usage of a _____ set of colors is advisable to avoid visual overload.

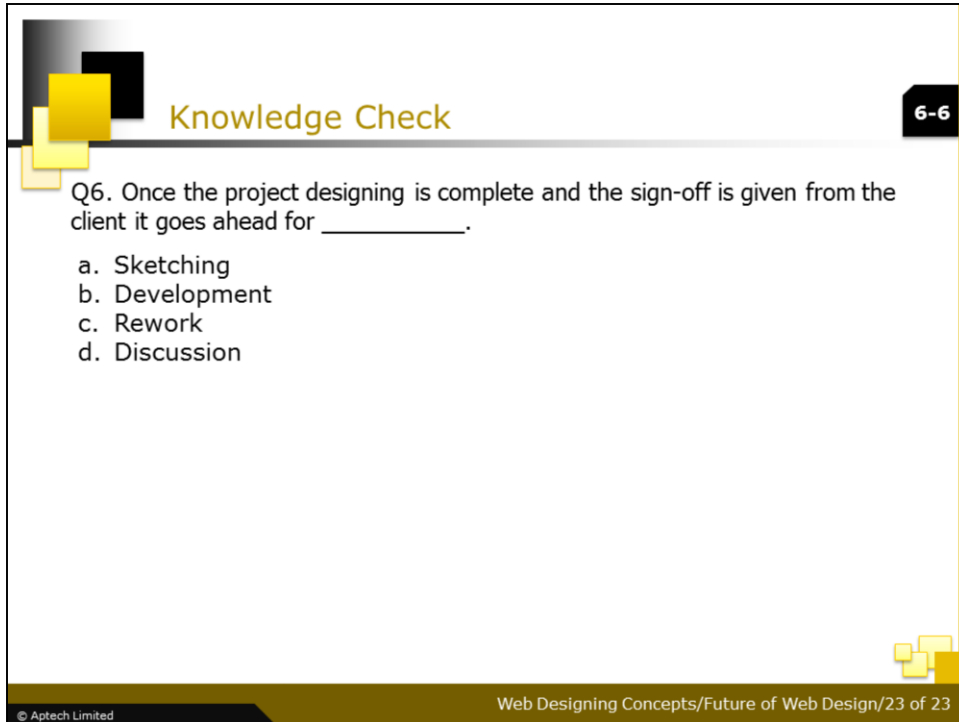
- a. Limited
- b. Unlimited
- c. Varied
- d. Exclusive

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Answer(s):

a. Limited



Knowledge Check 6-6

Q6. Once the project designing is complete and the sign-off is given from the client it goes ahead for _____.

- a. Sketching
- b. Development
- c. Rework
- d. Discussion

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Answer(s):

b. Development