

CSE211 Web Programming, Fall Semester 24/25

Assignment 1: Websites Conceptual Design and Mock-up

Seif-eldeen Mohamed Mostafa,222200039,CE

1- The defining characteristics of Web 2.0 to Web 4.0.

Web 2.0 as a web of people connections, Web 3.0 as a web of knowledge connections and web4.0 as a web Intelligence connections are described as four generations of the web.

. (International Journal for Science and Advance Research in Technology)

2- What are the key features of Web 2.0 and how it empowers the power of networks.

Rich user experience, user participation, dynamic content, metadata, Web standards, and scalability.(Wikipedia)

3- What are the key features of Web 3.0 and how it empowers the meaning of data and knowledge connections.

The notable features of web 3.0 would include the semantic web, decentralization, artificial intelligence, connectivity and ubiquity and spatial computing. (101 Blockchains)

4- What are the key features of Web 4.0 and how it empowers the intelligence connections.

Web 4.0 focuses on delivering highly personalized and context-aware experiences to users. By harnessing data from various sources, including social media, browsing behavior, and location, its applications can adapt to individual preferences, anticipate user needs, and deliver tailored content.(LCX Exchange)

5- The importance of collective intelligence, social networking, social media and social bookmarking.

Collective intelligence has been proposed, a shared agreement suggests that Collective Intelligence is a group or shared intelligence that emerges from the collaboration and or competition of many entities, either human or digital .(Science Direct)

The importance of Social networking If you have a good dentist and your friend needs a dentist you will recommend your dentist. If your friend likes the dentist and their friend has a tooth issue they will also recommend your dentist. Slowly people will network and pass along valuable dental information. At the end of the day the dentist increases in popularity and business, without even advertising. This harnesses the

importance of social networking sites for the web. The importance of social networking relates to increasing traffic to your site and increasing awareness for your site. This means that more people will become exposed to your business, which means more users to convert to sales.(OPTIMUS)

Social bookmarking is an effective way to promote content and increase traffic to a website. It helps create a community of users who share relevant links and content, which can help increase a website's visibility and search engine rankings. It can also help build relationships between users and brands, and provide an easy way to share content and stay up to date on the latest trends.(ResearchGate)

6- How these technologies empower the current and future business plans.

By using social media, many companies try to exploit new forms of interaction, collaboration, and knowledge sharing through leveraging the social, collaborative dimension of social software. The traditional collective knowledge management model based on a top-down approach is now opening up new avenues for a bottom-up approach incorporating a more personal knowledge management dimension, which could be synergized into collective knowledge using the social-collaborative dimension of social media.(ResearchGate)

7- How do you intend to use the latest technologies in your profession?

You can use collective intelligence to join or contribute to platforms like ISACs (Information Sharing and Analysis Centers) to detect and mitigate cyber threats faster.(ResearchGate)

You can use social networks to Track public data on social networks to identify potential security risks, such as phishing attempts, data leaks, or threat actor activities.(ResearchGate)

You can use Social media to Create engaging social media campaigns for public education on topics like phishing, password hygiene, or safe browsing habits.(ResearchGate)

References:

[1] A. Bouras, V. Giaoutzi, and D. Triantafyllidis, "Web Technologies: From Web 2.0 to Web 4.0," in 2016 IEEE 8th International Conference on Intelligent Systems and Knowledge Engineering (ISKE), pp. 258-263, doi: 10.1109/ISKE.2016.7745221

[2] Wikipedia, "Web 2.0," en.wikipedia.org, accessed Nov 4, 2024.

[3] M. Aldridge and M. Hamlin, "Top Web 3.0 Features," 101 Blockchains, 101blockchains.com, accessed Nov 4, 2024.

[4] LCX, "Introduction to Web 4.0," lcx.com, accessed Nov 4, 2024.

[5] C. Sun, Y. L. Papadopoulou, and M. Sharples, "Social media in organisations: Leveraging personal and collective knowledge processes," in International Conference on Knowledge Management, pp. 137-148, 2013, doi: 10.1007/978-3-642-39029-8_13