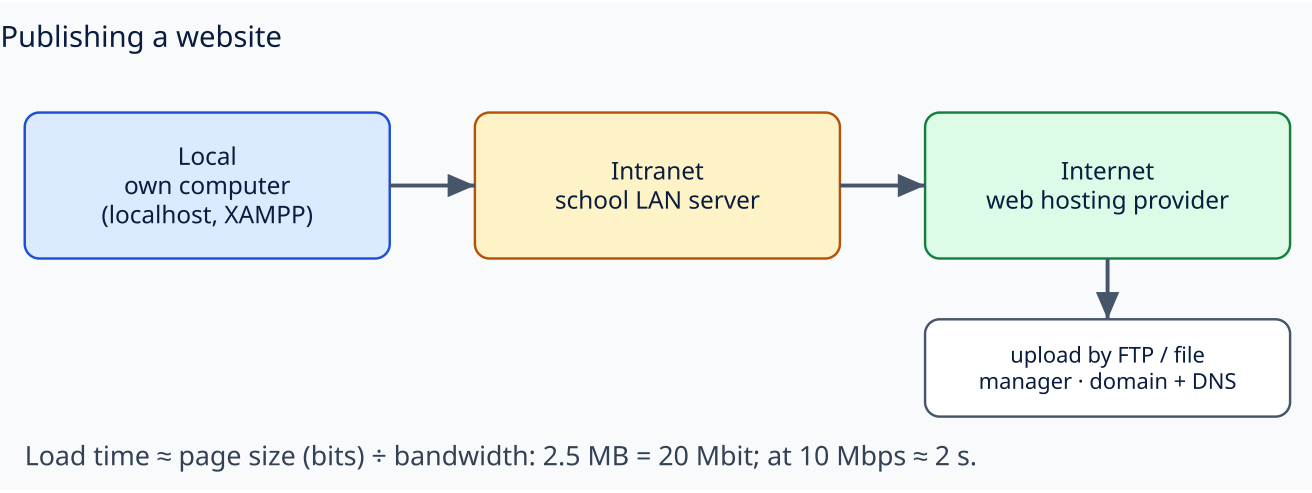
Grade 13 A/L ICT · Lesson 10

10.8 Publishing and Maintaining Websites

Syllabus 10.8. Publishing means putting a website where users can open it. **Local publishing** uses your **own computer** (a local server such as XAMPP at http://localhost) or a school **intranet**. **Internet publishing** uses a **web hosting service provider**: you get space on a **web server**, upload the files and link a **domain name**. After publishing you **maintain** the site and watch the **factors that affect its performance**.

1. Ways to publish



Local, intranet and Internet publishing

Method	Who can see it	How
Own computer	Only you (testing)	Install a local server (XAMPP/WAMP); put files in htdocs; open http://localhost
Intranet	Users on the school or office network	Copy files to the LAN web server
Internet	Anyone in the world	Register with a host (free or paid); upload by FTP or file manager; set the domain

2. Publishing on the Internet – steps

- Test the site locally and check every link.
- Choose a web hosting service provider – free hosts give a sub-domain such as myschool.free-host.com.
- Register a domain name (e.g. .lk through LK Domain Registry) and point it to the host with DNS.
- Upload files with an FTP client (FileZilla) or the host's file manager; index.html is the home page.

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- Create the MySQL database on the host for PHP pages and update the connection settings.

3. Factors affecting performance

Factor	Effect
Page size (large images, video)	More data → slower loading
Bandwidth of the user and the server	Low bandwidth → slow
Server speed, load and location	Busy or distant servers respond slowly
Number of files and scripts	Each file is another request
Browser and device	Old devices render slowly

🧱 **Worked example: A page is 2.5 MB and the user has 10 Mbps. Estimate the load time, then the time after a 1.8 MB image is compressed to 0.5 MB.**
2.5 MB × 8 = 20.0 Mbit; 20.0 ÷ 10 = **2.0 s**. New size 2.5 − 1.8 + 0.5 = 1.2 MB = 9.6 Mbit, so about **0.96 s** – the page loads twice as fast.

- **Maintenance**: update content, fix broken links, back up files and database, renew the domain and check security updates.

💡 1 byte = 8 bits: always multiply MB by 8 before dividing by a speed in Mbps.

🚀 **Beyond the syllabus (2026 update)** *Not required for the exam – read for interest.* In 2026 many sites are published free from Git with services such as GitHub Pages or Netlify and served through a CDN close to the user.

Key Words

Publishing – Making a website available to its users.

Local publishing – Running a site on your own computer or intranet.

localhost – Name of your own computer as a web server.

Intranet – Private network inside an organisation.

Web hosting – Service that stores a site on a server connected to the Internet.

Web hosting service provider – Company that rents web server space.

Free web hosting – Hosting at no cost, usually with a sub-domain and adverts.

FTP – File Transfer Protocol used to upload files.

Domain name – Name such as nie.lk that points to a server.

DNS – System that turns domain names into IP addresses.

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Bandwidth – Amount of data that can be sent per second.

Website maintenance – Keeping a site updated, working and secure.

Sample Q&A

1. Local vs Internet publishing?

> **Answer:** Local: own computer/intranet; Internet: hosting provider for everyone.

2. What is localhost?

> **Answer:** Your own computer acting as a web server.

3. How are files uploaded?

> **Answer:** By FTP or the host file manager.

4. Load time of 2.5 MB at 10 Mbps?

> **Answer:** 2.0 s.

5. Time after compressing the image?

> **Answer:** About 0.96 s.

6. Two maintenance tasks?

> **Answer:** Update content; fix broken links; backups.

MCQ

1. Running a site at http://localhost is

A. Internet publishing
B. intranet only
C. DNS
D. local publishing on your own computer
E. FTP

2. A school network that only staff and students reach is an

A. intranet
B. extranet only
C. Internet
D. portal
E. DNS

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3. Files are uploaded to a web host using

A. HTTP GET only
B. POP3
C. SMTP
D. FTP
E. DNS

4. Domain names are turned into IP addresses by

A. PHP
B. CSS
C. FTP
D. HTML
E. DNS

5. A 2.5 MB page at 10 Mbps loads in about

A. 25 s
B. 4 s
C. 0.25 s
D. 8 s
E. 2.0 s

6. After compressing the image, the page loads in about

A. 1.2 s
B. 4.6 s
C. 2 s
D. 0.96 s
E. 0.5 s

7. Which most reduces page loading time?

A. using a slower server
B. compressing large images
C. removing alt text
D. adding more files
E. adding more videos

8. The default home page file on most servers is

A. home.css
B. main.docx
C. start.php.txt
D. index.html
E. page1.jpg

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9. Which term means: “Making a website available to its users”?

A. Bandwidth
B. Web hosting service provider
C. Publishing
D. localhost
E. FTP

10. Which term means: “Running a site on your own computer or intranet”?

A. Intranet
B. Local publishing
C. Website maintenance
D. Free web hosting
E. Domain name

11. Which term means: “Name of your own computer as a web server”?

A. FTP
B. DNS
C. localhost
D. Publishing
E. Web hosting

12. Which term means: “Private network inside an organisation”?

A. Intranet
B. Bandwidth
C. Local publishing
D. Web hosting service provider
E. Domain name

13. Which term means: “Service that stores a site on a server connected to the Internet”?

A. DNS
B. Web hosting
C. localhost
D. Free web hosting
E. Website maintenance

14. Which term means: “Company that rents web server space”?

A. Web hosting service provider
B. Bandwidth
C. Intranet
D. Publishing
E. FTP

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15. Which term means: “Hosting at no cost, usually with a sub-domain and adverts”?

A. Website maintenance
B. Web hosting
C. Free web hosting
D. Domain name
E. Local publishing

16. Which term means: “File Transfer Protocol used to upload files”?

A. DNS
B. localhost
C. Web hosting service provider
D. Publishing
E. FTP

17. Which term means: “Name such as nie.lk that points to a server”?

A. Local publishing
B. Free web hosting
C. Domain name
D. Bandwidth
E. Intranet

18. Which term means: “System that turns domain names into IP addresses”?

A. Web hosting
B. DNS
C. FTP
D. localhost
E. Website maintenance

19. Which term means: “Amount of data that can be sent per second”?

A. Bandwidth
B. Intranet
C. Domain name
D. Web hosting service provider
E. Publishing

20. Which term means: “Keeping a site updated, working and secure”?

A. Free web hosting
B. Web hosting
C. Local publishing
D. DNS
E. Website maintenance

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Structured Questions

1. Compare local, intranet and Internet publishing. *(3 marks)*

> Own computer; LAN; hosting for everyone.

2. List the steps to publish a site through a free web host. *(5 marks)*

> Test; register; upload by FTP; check links; domain.

3. Explain four factors that affect website performance. *(5 marks)*

> Page size; bandwidth; server; number of files; device.

4. Calculate the load time of a 2.5 MB page at 10 Mbps and after compression. *(2 marks)*

> 2.5 × 8 = 20 Mbit ÷ 10 = 2 s; 1.2 MB → 0.96 s.

5. Explain why websites must be maintained. *(4 marks)*

> Up-to-date content; broken links; security; backups.

Summary

- Test locally with localhost.
- Intranet sites serve one organisation.
- Internet publishing uses a hosting provider and FTP.
- Size, bandwidth and server affect speed.
- Maintain content, links and security.

MCQ answer key – 10.8

1. **D** – Local.
2. **A** – Intranet.
3. **D** – FTP.
4. **E** – DNS.
5. **E** – 20 Mbit ÷ 10.
6. **D** – 1.2 MB = 9.6 Mbit.
7. **B** – Smaller files.
8. **D** – index.html.
9. **C** – Publishing – Making a website available to its users.
10. **B** – Local publishing – Running a site on your own computer or intranet.
11. **C** – localhost – Name of your own computer as a web server.
12. **A** – Intranet – Private network inside an organisation.
13. **B** – Web hosting – Service that stores a site on a server connected to the Internet.
14. **A** – Web hosting service provider – Company that rents web server space.
15. **C** – Free web hosting – Hosting at no cost, usually with a sub-domain and adverts.

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16. **E** – FTP – File Transfer Protocol used to upload files.
17. **C** – Domain name – Name such as nie.lk that points to a server.
18. **B** – DNS – System that turns domain names into IP addresses.
19. **A** – Bandwidth – Amount of data that can be sent per second.
20. **E** – Website maintenance – Keeping a site updated, working and secure.

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