The WWW

- World Wide Web (WWW) is a collection of **Hyperlinked/hypertext** electronic documents called *WebPages* accessible through the internet.
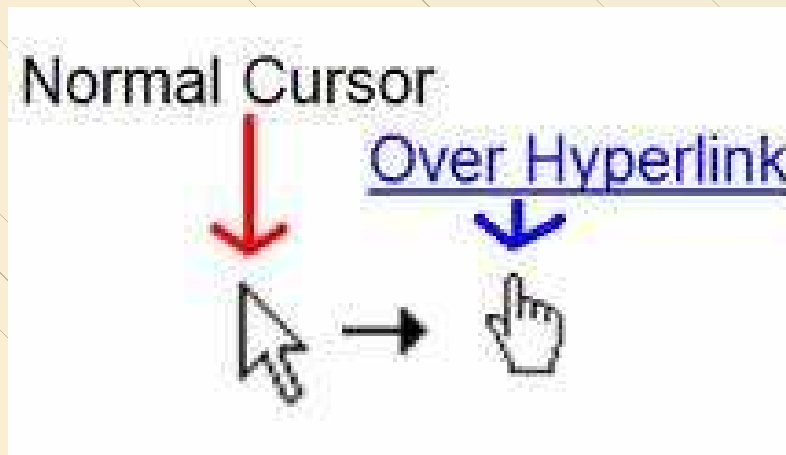
Difference between WWW and The Internet:

- Whereas *The Internet* is a network, the *WWW* is a collection of hypertext electronic documents called *WebPages*.

Hyperlink/Hypertext

- A *hyperlink* is a text or graphical reference to other electronic documents or data web users can follow by clicking.

Characteristics of hyperlinks;

   i.   They are usually underlined by default

   ii.   Their colour is usually different

   iii.   The mouse pointer usually changes its shape whenever it touches them.

Normal Cursor
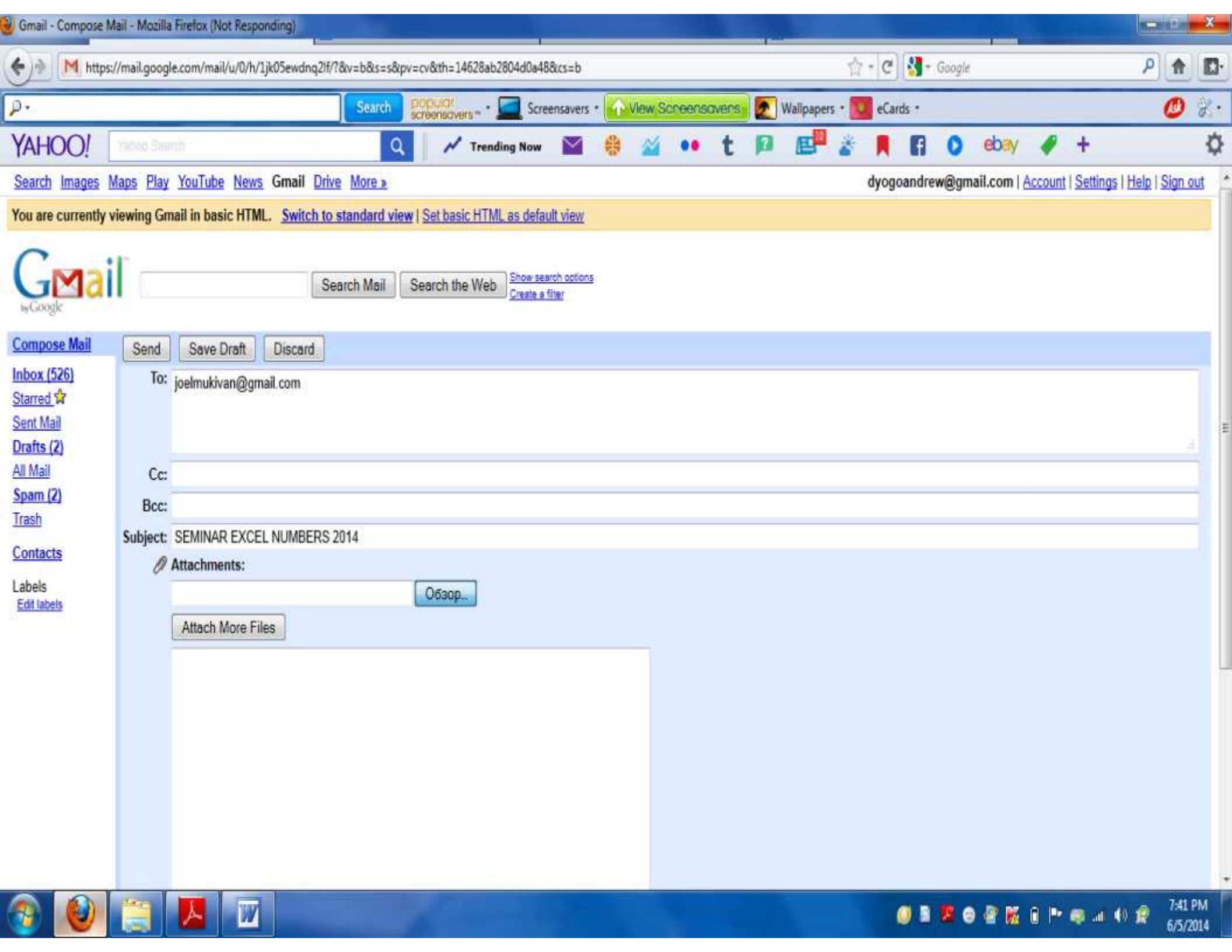
Over Hyperlink

The web

Note:

1. The WWW emerged in the early 1990's but has grown rapidly to become the most widely used service on the Internet

Webpage

- A **Web page** is a single electronic hypertext document.

- Hypertext documents are ***multimedia*** (i.e. they contain text, sound, audio, videos/motion, graphical images, etc) documents

- A collection of several WebPages owned by an organisation or individual is called a ***website.***

Parts of a Webpage

- **Shared boarder/banner**: has content common to all pages in the website like logo, search box and hot spot to take one back to the index page

- **The menu system**: Has navigation tools

- **Content area**: Contains the page information – text, graphical images, videos, flash movies, etc.

- **Footer:** with copyright notices, links to terms and privacy statements, etc

- **Hit counter or web counter: A** indicates the number of **visitors**, or **hits**, a particular webpage has received

M https://mail.google.com/mail/u/0/h/1jk05ewdnq2lf/?&v=b&s=s&pv=cv&th=14628ab2804d0a48&cs=b

☆ ・ C | Google

Search | popular screensavers™ ・ Screensavers ・ View Screensavers | Wallpapers ・ eCards ・

YAHOO! | Yahoo Search | Trending Now

Search Images Maps Play YouTube News Gmail Drive More »

dyogoandrew@gmail.com | Account | Settings | Help | Sign out

You are currently viewing Gmail in basic HTML. **Switch to standard view** | Set basic HTML as default view

Gmail
byGoogle

Search Mail | Search the Web | Show search options
Create a filter

Compose Mail

Inbox (526)
Starred ☆
Sent Mail
Drafts (2)
All Mail
Spam (2)
Trash

Contacts

Labels
Edit labels

Send | Save Draft | Discard

To: joelmukivan@gmail.com

Cc:

Bcc:

Subject: SEMINAR EXCEL NUMBERS 2014

Attachments:

Обзор...

Attach More Files

7:41 PM
6/5/2014

Types of websites………1

1. *Web Portal*: Is a gateway or catalogue web page for finding other web pages or specialized information. Some portals can provide links to selected relevant sites. E.g. UNEB Schools portal

2. **Wiki:** It is a form of website that allows site visitors to Create or add content, Edit or Delete/remove already posted content on the website. E.g Wikipedia.com, Facebook.com, etc.

3. **Social networking websites:** For social networking amongst friends and family. Eg; Facebook.com, twitter.com, instagram, etc.

Types of websites ………2

4. **Commercial or Business websites:** They are sites created for uniting buyers & sellers of goods, services and works. For e.g. Amazon.cm, Everbuying.com, mudundo.com, tradecarview.com, etc.

5. **Educational websites:** They are educational platform for teaching, learning and assessment. Teach-ict.com, etc.

6. **Entertainment & leisure sites:** They are specifically recreational sites. – animalplanet.com, Disney, African magic

7. **News groups/news feeds**: Sites specifically devoted to providing current affairs/news

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Types of websites 3

8. **Forum sites/Discussion boards**: Offer people an opportunity to share views about topical issues.

9. **Archive sites**: Created for preserving valuable historical content.

10. **Web/Content aggregator**: A website that collects or combines several online data sources into one. They provide links to valuable information sources. For example; alltop.com (listing viable information sites), bizsugar.com, Lifehacker.com, Smallbusiness.chron.com, etc.

11. **Portfolio sites**: they are web pages created for people who want to show case to potential customers, suppliers or employers.

Types of websites ………4

10. **Spider sites:** Websites with link buttons like Google.

11. **Yellow Pages**: Websites with a a simple list of possible pages in the website (Educ, Art, Entertainment, Health, News, Recreation, etc).

12. **Static website:** Is one that stores its pages on a server from where viewers can access the WebPages.

13. **Dynamic website**: These only display the information needed by the viewer and the whole Webpage can only be displayed of request.

Types of websites 5

14. Search engine: This is a Web site used *to search* for information on The Internet. Search engines use a program known as a wanderer, crawler, robot, worm, or spider to collect information of WebPages and other internet resources.

Common example of search engines are;

- **Google** – www.google.com

- **Dogpile** – www.dogpile.com

- **Bing** – www.bing.com

- **Yahoo** – www.yahoo.com

- **Vivisimo** – www.vivisimo.com

Types of websites ………6

15. **Blogs**: A blog is an online journal or diary for expressing personal opinions or providing stories around the world. Owners of these sites are called Bloggers.

Types of blogs:

- Personal blogs

- Company blogs

- Public blogs

- News & views blogs

- Micro blogs: where posts are in very of very short comments – like Twitter

Types of websites 7

Advantages of blogs

- Give people an opportunity to air out their mind
- Join people of similar mind & interests together
- There are a million blogs to choose from
- The public can always leave comments on others blogs
- Easy and quick to setup and update

Disadvantages of blogs

- They are too public
- They are usually biased. Too opinionated
- Some bloggers contribute rude and inappropriate comments
- Some blogs hold outdated information

Qualities of a good website

- Not biased – Has appropriate content
- Quick response – Fast download and upload
- Easy to navigate
- Well updated
- Appropriate design – Appropriate colour balance, variations and readable data (text and images)
- Good administrative tools for tracking visitors, frequently used, downloads, etc.

Good to know

- **Surfing :** Means moving from one website/page to another for topics of interest, the term surf is generally used to describe a rather undirected type of web browsing.

- Link – A highlighted word, phrase, or image that allows you to jump to another document on the World Wide Web.

- An introductory/preamble web page in a website is referred to as a *Home page* or an *Index page.*

- Therefore, a Home page/Index page as a text or graphical screen display;
    a) Welcomes site visitors or users
    b) Explains the nature of organisation that owns the website
    c) Has the general link bar to other web pages in the website.

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Requirements for maintaining WebPages

1. **A Web Browser**. This is an application software used to access and view web pages. Examples of web browsers include; Mozilla Firefox, Google chrome, Opera, Safari, Internet explore, Netscape navigator, Konquerer, etc.

Features/elements of web browsers;

- Inbuilt search engine
- Favorite section for holding frequently visited sites
- Address bar
- Navigation buttons/bar: A set of graphical images/buttons that work as control links to other sections in a website.
- History section

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Requirements for maintaining WebPages

2. The Uniform Resource Locator (URL):

This is a unique address for a specific website on the internet. It helps the browser to quickly locate a document from the host computer.

The URL tells the browser where to locate the web page. i.e. www.transworld.educ.ug.

NB: Most of the URLs have got inbuilt *plug-ins* or specialized softwares for displaying specialized content. E.g. – Flash player, Acrobat reader, Quick time,

Shock wave, Direct X, etc.

Requirements for maintaining WebPages

A URL consists of a protocol, a domain name and some times the path to a specific web page or location on the web page. For instance in the URL below;

URL = http://www.Mkdtechnologies.com/internet/data.html

- **Protocol Identifier = http**

- **www.Mkdtechnologies.com**. Is the **Host/Resource name** or IP Address, Where;

  - WWW is the = Sub Domain
  - **Mkdtechnologies** is the = **Domain Name**
  - **.com is the = _Top-level domain (TLD) or Domain name suffix_**

- Internet/data.html **=** is the **file Path**. *Where;*
  - Internet is the **=** *Directory*
  - data.html is the **=** *File Name*

The Top-Level-Domain (TLD) shows the nature of webpage one is viewing. E.g.;

.com for Commercial organizations

.org for None profit organizations

.edu for educational organizations

.mil for the US military

.ug for Uganda government

.uk for United Kingdom

Etc.

3. **A Web Server**. This is a software that manages users requests for web pages. It uploads web pages to *Host computers* for storage, and, also delivers or downloads them (WebPages) to the users computer.

Requirements for maintaining WebPages

4. **Website Hosting Services**: Website hosting services are basically the plot of internet land where an organisation stores her WebPages for access world wide. **Website Hosting Service providers** maintain **Host computers** which are online **24/7**.

- Examples of **Website Hosting Service providers**; Blue Host, I-Page, Host gator.com, Domain.com, Fat cow, StartLogic, Web.com, SiteBuilder.com, smallOrange, etc.

Factors to consider when choosing a Host

- **Bandwidth** - If your site is to have lots of graphics, dozens of pages, and large amounts of traffic, you're going to need decent bandwidth and disk space.

- **Compatibility** – for instance the type of operating systems that are supported

- **Reliability and availability** - look at site "Uptime."

- **Security** – Look at host firewalls, daily backups, and user authentication

Requirements for maintaining WebPages

5. **Web Master:** This is an ICT professional with skills for developing and maintaining WebPages.

6. **Hypertext Markup language (HTML):** This is a programming language/software a web master uses to create web pages. As a specialized software it easily helps in the creation and formatting of links and other specialized features for handling text, images, sound and videos.

NB: The www documents have got internationally followed standards for their creation, formatting, storage, retrieval, and display in a network environment.

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Requirements for maintaining WebPages

7. **Hypertext Transfer Protocol (HTTP)**: This is an in build system standard for guiding of transmission of **Hypertext Documents** across the internet.

8. **Gopher:** A software that links several websites into one unified information service.

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Functions of websites

1. Communication platform

2. Improving corporate image – pride of ownership

3. Data or information storage

4. Building skills for editing, & publishing

5. Improve research

6. Sharing of knowledge/experiences

7. Resources mobilization

8. Trading purposes advertising and keeping in touch with trading partners.

9. Self expression – need for being heard.

Advantages and Disadvantages of maintaining a website

- *Suggest some possible advantages and disadvantages of an organisation having a website.*

- *Prenary*

The Internet

- What is the internet?

- How can I access it or get connected?

- What can I use the internet for?

- What are its pros and cons

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The Internet

Meaning:

- **Internet is an international or global system of interconnected computer networks using TCP/IP.**

NB:

1. This global interconnectivity is achieved through communication lines like telephone facilities, cable and satellite radio links.

2. **Internet Protocols** are standardized guidelines that guide communications or data movements across internet based resources. These standards are unified into what is known as the *Internet Protocol Suite.*

Internet Protocol Suite (IPS).

- The Internet protocol suite provides [end-to-end data communication](#) specifying how data should be packetized, addressed, transmitted, [routed](#), and received. This functionality is organized into four [abstraction layers](#)

- The IPS is subdivided into four [abstraction layers](#). i.e;

1. Application layer: This specifies the shared [communications protocols](#) and [interface](#) methods used by [hosts](#) in a communications network.

- Remote login to hosts: Telnet
File transfer: File Transfer Protocol (FTP), Trivial File Transfer Protocol (TFTP)

- Electronic mail transport: Simple Mail Transfer Protocol (SMTP)

- Networking support: Domain Name System (DNS)

- Host initialization: BOOTP

- Remote host management: Simple Network Management Protocol (SNMP), Common Management Information Protocol over TCP (CMOT)

Examples are;

- FTP, HTTP, NTP, POP, RIP, SMTP and Telnet

The **transport layer**

- The protocols of this layer provide host-to-host communication services for applications. The best-known transport protocol of TCP/IP is the Transmission Control Protocol (TCP)

- Common examples are;
  TCP-

- UDP – In computer networking, the **User Datagram Protocol** (**UDP**) is one of the core members of the Internet protocol suite.

- DCCP – In computer networking, the **Datagram Congestion Control Protocol** (**DCCP**) is a message-oriented transport layer protocol.

- SCTP – The **Stream Control Transmission Protocol**(**SCTP**) is a computer networking communications protocol andworks like TCP

- RSVP – The **Resource Reservation Protocol** (**RSVP**) is a transport layer protocol designed to reserve resources across a network for quality of service (QoS) using the integrated services model.

The **internet layer**

- The **internet layer** is a group of [internetworking](#) methods, protocols, and specifications in the [Internet protocol suite](#) that are used to transport [datagrams](#) (packets) from the originating [host](#) across [network boundaries](#), if necessary, to the destination host specified by an [IP address](#). Examples are;

  - The **Internet Control Message Protocol**(**ICMP**) is a supporting protocol in the Internet protocol suite.

  - The **Internet Protocol** (**IP**) is the principal communications protocol in the Internet protocol suite for relaying datagrams across network boundaries.

The link layer

- The link layer is the group of methods and [communications protocols](#) that only operate on the link that a host is physically connected to. Examples are;

    - The **Address Resolution Protocol** (**ARP**) is a communication protocol used for discovering the link layer address

    - **Ethernet** is a family of computer networking technologies commonly used in local area networks (LAN), metropolitan area networks (MAN) and wide area networks (WAN).

    - In computer networking, **Point-to-Point Protocol** (**PPP**) is a data link layer communications protocol used to establish a direct connection between two nodes.

    - **Ethernet** is a family of computer networking technologies commonly used in local area networks (LAN), metropolitan area networks (MAN) and wide area networks (WAN).

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Examples of internet Based Protocols - 1

1. *Transfer Control Protocol (TCP):* **Is a protocol suite that determines how computing devices connect, send and receive information on the internet**

2. *Internet protocol (IP):* **An address that uniquely identifies each computing device on the internet**

3. *File Transfer Protocol (FTP): An internet standard that allows users to upload and download files with computers*

4. *Hyper Text Transfer Protocol (HTTP): A set of rules by which an HTML documents are transferred across internet based devices*

5. **HTML:** **Hyper text mark up language in which most web pages are written.**

Examples of internet Based Protocols - 2

6. **Simple Mail Transfer Protocol** (**SMTP**): Facilitates transfer of mail messages.

7. **Telnet** is a protocol used on the Internet or local area network to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection.

Internet access Points and Requirements

- Internet enabled phones and personal computers

- Office computers

- Internet cafes

- ISP – internet service provider

Internet service provider - ISP

ISP is a business organisation with permanent internet connectivity, and specializing in selling of internet services

ISPs in Uganda today

- *Orange telecom*
- *Mobile Telecommunication Network (MTN)*
- *Uganda Telecommunication Limited (UTL) broad band*
- *AirTel Uganda*
- *Inconnect*

Services Offered by ISPs

- *Internet access*
- *Domain name registration*
- *Website hosting*
- *Provide customized email addresses*
- *Access to software tools*
- *Provide fire walls*
- *Manage internet traffic e.g. by use of dedicated lines*
- *Provide backup storage of data*
- *NB: Considerations for choosing an ISP (see [factors for selecting a Host](#))*

Internet based terms/concepts

- **STREAMING.** This is the process of transferring audio or multimedia information in a continuous and even flow from a remote computer or event. For instance watching live videos from You-tube

- **Download**: The process of getting information from a remote computer

- **Upload**: The process of sending information to a remote computer.

Internet based terms/concepts

- Buffering:

Services provided by the internet - 1

1. **Communication services:**
   - E-mail services
   - Internet telephone services
   - Skype
   - Mailing lists services file transfer services
   - Short messages texting by several platforms
2. **World wide web services**
3. **Chat room services:**
4. **News group services :**
5. **Internet forums/message board services :**
6. **Electronic-commerce services in form of;**
   - Electronic buying and selling of products
   - Electronic promotions or advertising of products

Services provided by the internet - 2

7. **E-banking services through;**

- *Electronic funds transfers (EFTs)*
- *Electronic money services*
- *Electronic payments*
- *Mobile money*
- *Mobile banking.*

8. **E-publishing services:**

9. **E-learning services :**

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4(a)   With an example , Describe the parts of an e-mail address

User name- **this specifies the identity of the recipient of the email.**

@-   *this at symbol acts as a separator between the user name and the domain name.*

*Domain name-***this identifies the domain that hosts the email account.**

Dot(.)-this separates the domain name and domain type.

Domain type- **this identifies the category of the domain.**

For example

dyogoandrew@gmail.com

user name   *domain name*   *domain type*

separator   *dot*

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(b)   State three examples of email software

i.   *yahoo mail*

ii.   *gmail*

iii. *hotmail*
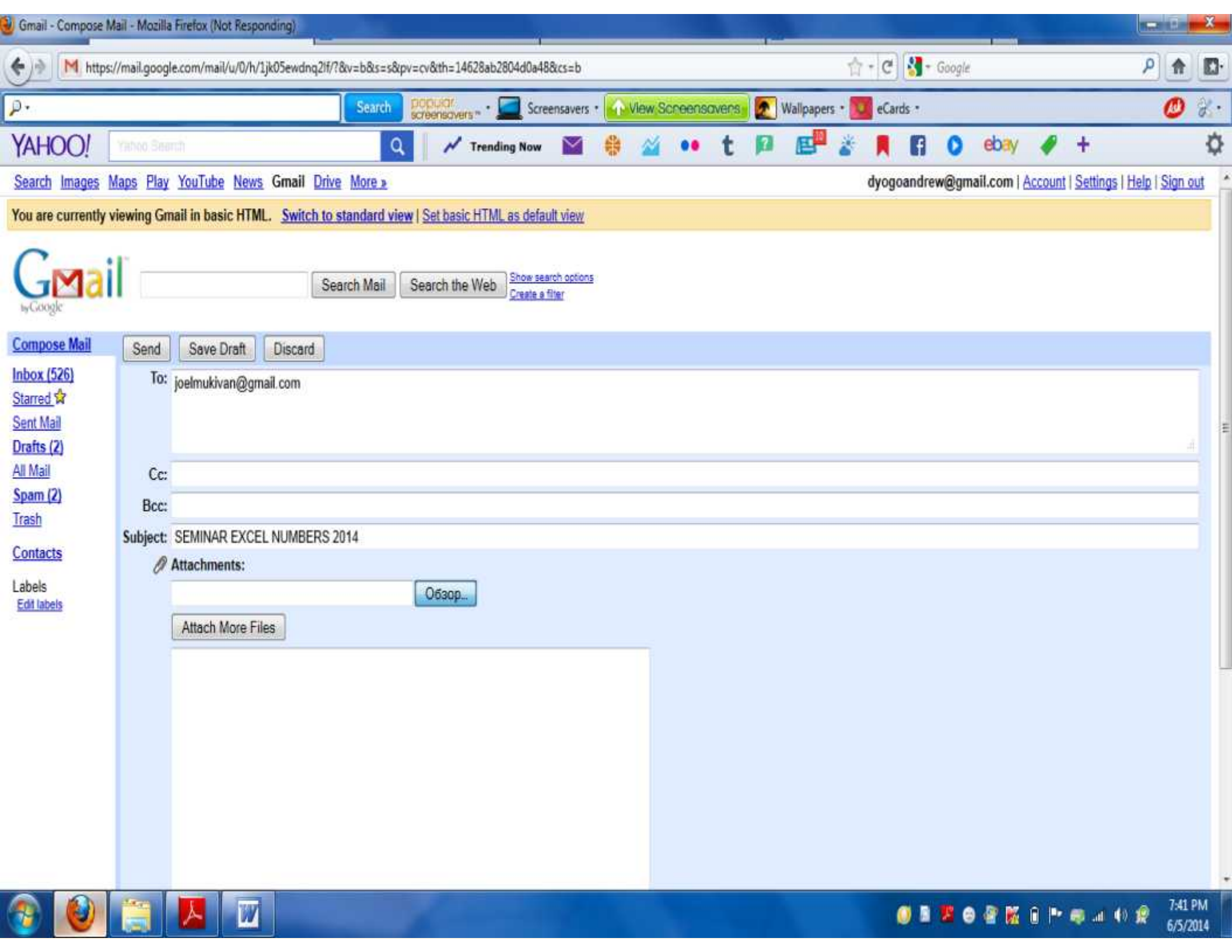
iv. *rocketmail*

v. *ovi mail*

(c)   Distinguish between sign in and sign up as used with e-mails

Sign in is used to access content of an already existing e-mail account by use of a user name & password while Sign up is used to create a new email account

5(a)   State the function of the following fields as regards emails

(i) To: *The field where you type in the email address of the recipient(s). It specifies to whom the message is to be (or was) sent.*

(ii) Subject: *This provides a hint as to what the message is about.*

(iii) Cc: *this tells us that the message was "Carbon copied" to another user. In other words this   field is used when one wants to send a copy of the email to other recipients*

(iv) Bcc: *which stands for Blind carbon copy- this is often used if additional copies of the same email message is to be sent out to other recipients but without each of them knowing about it.*

(v)Attachment: *This is a textual, graphical, audio or video file that accompanies an email. It can be downloaded by the recipient for use.*

M https://mail.google.com/mail/u/0/h/1jk05ewdnq2lf/?&v=b&s=s&pv=cv&th=14628ab2804d0a48&cs=b

☆ ▾ C 🔧 ▾ Google

Search | popular screensavers™ ▾ | Screensavers ▾ | ⬆ View Screensavers | Wallpapers ▾ | eCards ▾

YAHOO! Yahoo Search 🔍 📈 Trending Now ✉ ⚽ 📊 •• t 📷 🖥 🎉 🔖 f ▶ ebay 🏷 +

Search Images Maps Play YouTube News Gmail Drive More »

dyogoandrew@gmail.com | Account | Settings | Help | Sign out

You are currently viewing Gmail in basic HTML. **Switch to standard view** | Set basic HTML as default view

Gmail
by Google

[search box] Search Mail Search the Web Show search options / Create a filter

Compose Mail

Send Save Draft Discard

Inbox (526)
Starred ★
Sent Mail
Drafts (2)
All Mail
Spam (2)
Trash

Contacts

Labels
 Edit labels

To: joelmukivan@gmail.com

Cc:

Bcc:

Subject: SEMINAR EXCEL NUMBERS 2014

📎 Attachments:

[ ] Обзор...

Attach More Files

7:41 PM
6/5/2014

(b) Explain the following terms as used with email.

(i) Compose- *this is the process of creating a new mail message.*

(ii) Inbox- *the storage location of incoming emails*

(iii) Sign out- *this is the process of exiting an email account*

(iv) Forward- *this feature allows one to pass on a received mail to other recepients*

(v) Check mail- *this feature enables a user to view all the details of a received mail*

Revision exercise - 1

1. **What is the difference between;**
    a) Computer communication and computer network
    b) Intranet and extranet technology
    c) Email and the internet
    d) Internet and world wide web (WWW)

2. **Briefly describe;**
    a) Four forms or types of networks
    b) The three LAN models

3. **State four components of an e-mail message window**

4. **Give three limitations of using e-mails as means of communication**

5. **Explain the following fields used in e-mail accounts:**
    a) CC
    b) BCC
    c) Compose
    d) Drafts
    e) starred

6. **State three netiquette guidelines for electronic mail users**

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Revision exercise - 1

7. Who is an Internet Service Provider (ISP)

8. Give four examples of ISPs in Uganda.

9. Give five services provided by ISP's in Uganda

10. State five services provided on the internet.

11. State five factors that affect data transmission speeds across networks.

12. Explain the nature of crimes committed by some internet users

13. State how crimes committed by internet users can be averted.

14. Distinguish between the following;
    a) Domain name and an IP address
    b) Analogue from digital signals
    c) Modulation from demodulation
    d) Serial transmission from parallel transmission
    e) Physical from wireless transmission media

15. Give any three factors to consider when choosing transmission media

Revision exercise - 1

16. State four elements of a data transmission model

17. What is data transmission media?

18. With the help of examples give the difference between guided and unguided data transmission media.

19. Outline the advantages and disadvantages of <u>Guided transmission media</u>:

20. State the functions of the following protocols;
    a) TCP
    b) UDP
    c) SMTP

21. Explain the following terms as related to world wide web
    a) Web browser
    b) Search engines
    c) Web server
    d) Home page
    e) Marquee

22. Give three examples of web authoring software