

India's Most Popular
Online IT Championship



28 States, Hundreds of School,
Thousands of Students, One Platform



Preparation & Reference Book
Category - Senior

Class : IX

 www.itolympiad.in

CITIS Infotech : Knowledge Partner

Unit 4. Internet applications: Email

Aim: You will learn about -

- What is an email
- Email Ethics.
- Features of Gmail.

Learning Outcomes:

- Understanding features of an email
- Using an email effectively
- Using different features of email

Understanding E-mails

Email is short for 'electronic mail'. Like a letter, an email is a message sent from one person to another, except instead of using paper and the postal service, the message is carried electronically from your computer to the recipient(s) via the Internet. Just like sending a letter or a parcel you can include all sorts of things such as photographs, music and videos with your email.

As described in "Understanding the Email", an email account for the purposes of these series of articles is defined as the server location where your email address resides and email gets delivered or in short, the term "email account" is used synonymously with the term "email address". However, there is one topic which needs some additional



clarification which is “what is contained in your email account”. At the most basic level, an email account is intended to deal with the sending and receiving of email. However, an important part of that process involves contacts (also commonly referred to generically as an <Address Book>) and for most people also includes calendar and task entries. All these items sum up to the PIM (Personal Information Management) information otherwise referred to here as Email Account Content

Email Account Content

The content maintained at the server level for a given email account is generally comprised of the following items

1. Email
2. Contacts
3. Contact Groups / Distribution Lists
4. Calendar
5. Tasks

There are also various standards for Calendar items making it easier to manage a calendar based on differing systems (predominantly Calendar and CalDav). However, not all systems and email clients support all calendar types. For those who want a more in-depth technical overview of calendar standards, doing a search on the term “calendar sharing standards” will return numerous results.

Accessing Email account information

Once you have your email account, you know need to be able to retrieve the information and do something with it. There are two categories of email clients, each with different capabilities and functionality – Browser based Webmail and Desktop/Mobile based email clients.



There are countless different desktop/mobile email clients, free and paid. The most popular paid email client being Outlook with Thunderbird following as the most popular free email client. Just because you are using a mobile device to access an Outlook.com account for example, doesn't mean that you are using the Outlook desktop client. Mobile email clients are exactly that, email clients provided by vendor with a given device.

Email Ethics

Email etiquette refers to the principles of behaviour that one should use when writing or answering **email** messages.

Email etiquette refers to the principles of behaviour that one should use when writing or answering email messages. Because email is less personal than a phone or in-person conversation but quicker to send than a letter, it is possible for serious breaches of manners to take place. The rules below comprise an overview of the most common principles of email behaviour.

Here are some of the dos and don'ts of email etiquette.

Do have a clear subject line- Most of us have to compete with the hundreds of emails clogging our inbox every day, so the clearer your subject line, the more likely your message will be read. For example, if you're sending a timetable to someone, be specific and write, "Timetable for program"

Don't forget your signature- Every email should include a signature that tells the recipient who you are and how to contact you. Set it up to



automatically appear at the end of each email. Include all of your contact details so the recipient doesn't have to look up your address, email or phone number.

Do use a professional salutation- Using “Hey,” “Yo,” or “Hiya” isn't professional, no matter how well you know the recipient. Use “Hi” or “Hello” instead. To be more formal, use “Dear (insert name).” Using the person's name in the salutation -- “Hello Priya” -- is quite appropriate, but remember not to shorten a person's name unless you're given permission to do so.

Don't use humor- Humor does not translate well via email. What you think is funny has a good chance of being misinterpreted by the other party, or taken as sarcasm, without the accompanying vocal tone and facial expressions. When in doubt, leave humor out of business communications.

Do proofread your message- Don't be surprised if you're judged by the way you compose an email. For example, if your email is littered with misspelled words and grammatical errors, you may be perceived as sloppy, careless, or even uneducated. Check your spelling, grammar and message before hitting “send.”

Don't assume the recipient knows what you are talking about- Create your message as a stand-alone note, even if it is in response to a chain of emails. This means no “one-liners.” Include the subject and any references to previous emails, research or conversations. It can be frustrating and time consuming to look back at the chain to brush up on the context. Your recipient may have hundreds of emails coming in each day and likely won't remember the chain of events leading up to your email.



Format of Professional Email

For most of us, email is the most common form of business communication so it's important to get it right. Although emails usually aren't as formal as letters, they still need to be professional to present a good image of you and your company.

Follow these five simple steps to make sure your English emails are perfectly professional.

1. Begin with a greeting
2. Thank the recipient
3. State your purpose
4. Add your closing remarks
5. End with a closing

1. Begin with a greeting

Always open your email with a greeting, such as **“Dear Sneha”**. If your relationship with the reader is formal, use their family name (eg. **“Dear Mrs. Sathe”**). If the relationship is more casual, you can simply say, **“Hi Rama”**. If you don't know the name of the person you are writing to, use: **“To whom it may concern”** or **“Dear Sir/Madam”**.

2. Thank the recipient

If you are replying to a client's inquiry, you should begin with a line of thanks. For example, if someone has a question about your company, you can say, **“Thank you for contacting ABC Company”**. If someone has replied to one of your emails, be sure to say, **“Thank you for your prompt reply”** or **“Thanks for getting back to me”**. Thanking the reader puts him or her at ease, and it will make you appear more polite.



3. State your purpose

If you are starting the email communication, it may be impossible to include a line of thanks. Instead, begin by stating your purpose. For example, **“I am writing to enquire about ...”** or **“I am writing in reference to ...”**.

Make your purpose clear early on in the email, and then move into the main text of your email. Remember, people want to read emails quickly, so keep your sentences short and clear. You'll also need to pay careful attention to grammar, spelling and punctuation so that you present a professional image of yourself and your company.

4. Add your closing remarks

Before you end your email, it's polite to thank your reader one more time and add some polite closing remarks. You might start with **“Thank you for your patience and cooperation”** or **“Thank you for your consideration”** and then follow up with, **“If you have any questions or concerns, don't hesitate to let me know”** and **“I look forward to hearing from you”**.

5. End with a closing

The last step is to include an appropriate closing with your name. **“Best regards”**, **“Sincerely”**, and **“Thank you”** are all professional. Avoid closings such as **“Best wishes”** or **“Cheers”** unless you are good friends with the reader. Finally, before you hit the send button, review and spell check your email one more time to make sure it's truly perfect!y.

Here are set of guidelines that should be followed while working with email:

- Try to make your message as short as possible. It will make your message easy to read and understood.



- Be careful about spelling and grammar while typing a message.
- Use emoticons, smiles when required.
- Email address entered must be correct.
- The subject heading of a message should be clear and descriptive.
- Follow the same rules as if you are writing a letter or a memo.
- Sending a message that has already been forwarded or replied many times may contain many angled brackets. It is better to remove the angled brackets from the message.
- While sending mails to multiple persons, specify their email addresses in the BCC: field so that the spammers cannot come to know about addresses of other recipients to whom you have sent a copy.
- Keep size of attachment as small as possible.
- Always add your signature at the end of email.
- Before you send, make it sure everything is fine because you cannot call back a sent mail.

Features of Email

Now a day, the mail client comes with enhanced features such as attachment, address book, and MIME support. Here in this chapter we will discuss all of these features which will give you a better understanding of added feature of a mail client program.

Attachment

Ability to attach file(s) along with the message is one of the most useful features of email. The attachment may be a **word document, PowerPoint presentation, audio/video files, or images.**

- In order to attach file(s) to an email, click the attach button. As a result, a dialog box appears asking for specifying the name and location of the file you want to attach. Once you have selected the appropriate file, it is attached to the mail.



- Usually a paper clip icon appears in the email which indicates that it has an attachment. When adding an attachment it is better to compress the attached files so as to reduce the file size and save transmission time as sending and downloading large files consumes a lot of space and time.

Address Book

Address book feature of a mail program allows the users to store information about the people whom they communicate regularly by sending emails. Here are some of the key features of an Address book:

Address book includes the nick names, email addresses, phone number etc. of the people. Using address book allows us not to memorize email of address of a person, you just have to select recipient name from the list. When you select a particular name from the list, the corresponding email address link automatically get inserted into the **To:** field. Address book also allows creating a group so that you can send an email to very member of the group at once instead of giving each person email address one by one.

Features of Gmail

Along with the sending & receiving mail gmail has got very interesting features in it.

They are as follows

1. Filters

Filters were the very first things I set up once I converted to Gmail as my primary email program. Gmail Filters enable you to organize your email in a variety of ways, including sending emails from your mother-in-law directly to the trash. Just joking! Filters



are easy to set up and once you have a few active, you'll quickly discover more ways that filtering will make your email inbox easier to sort through.

2. Keyboard Shortcuts

Windows operating systems, Mac OS and several software programs all have their own set of keyboard shortcuts but so does Gmail. Once you memorize the keyboard shortcuts for a few frequently used tasks, you'll find that you'll be able to go through your email much more quickly. Check out the Gmail Keyboard Shortcuts page for more information on the shortcuts including keyboard requirements.

3. Hidden Symbols for Filtering

Did you know that you could amend your Gmail address to use either a plus sign or dots? I didn't. I won't try to describe how you do this, instead I'll refer you to the Gmail Blog (2 hidden ways to get more from your Gmail address) but I will tell you one way that this might be extremely useful – filtering unwanted solicitations. If you're filling out an online form that requires your email address, simply enter my.email.address@gmail.com instead of myemailaddress@gmail.com. When unsolicited emails come in to the address with the dots, you know that the site shared your email address.

4. Priority Inbox

One of Gmail's newest features is the Priority Inbox. Watch this video to learn how you can benefit by using this feature. Use Multiple Accounts by Granting Access



Do you have a business-related Gmail account that you want an assistant to have access to? If so, you can grant them access to your account. This will enable them to access your Gmail account without needing to log out of their own account. Learn how to set up this convenient feature: [Email delegation: Granting access to your Gmail account](#).

6. Mute Conversations

Tired of the off-topic political rants on your B2B mailing list but don't want to unsubscribe from the list? Gmail has a simple solution to this problem – mute the conversation. Simply mute the conversation and the thread won't be bumped back to your Inbox anytime new messages are received. Find out how to do this: [Muting or ignoring conversations](#).

7. Always Use HTTPS

Even if you're in the habit of using a secure connection when using Gmail while you're on a public network, you may want to consider forcing this setting. Simply log in to Gmail, click on Settings, set the Browser Connection to “always use https” and save your changes. Although this is a beneficial security setting, Google has noted that errors may be seen in the Gmail mobile application and the Google toolbar if you do enable this feature.

8. Video Chat

Are you traveling and want to stay connected with your family? Check out Gmail's Video Chat feature.

9. Canned Responses

Using canned responses is another way to cut down the amount of time you spend on email daily. If you constantly receive emails



asking for your company's mailing address, your first step should be to verify that your mailing address is listed in an easy-to-find place on your website and your second step should be creating a Gmail canned response.

10. Advanced Search & Search Operators

Once you've been using Gmail for a while, you'll begin to love the advanced search and search operators feature. Do you remember receiving an email with an attachment sometime around Christmas 2007 but don't recall who it was from? You can use the Gmail advanced search feature to look for messages that meet your criteria.

* * *

Unit 5: Internet Advance : Blogging

Aim: You will learn about -

- What are blog?
- Characteristic of blog
- Importance & uses of blog
- How to create blog?
- How to publish content.

Learning Outcomes:

- Working with blogger for Creating a blog
- Create the relevant post for it & publish it
- Follow educational blog

What are Blog.

A blog is a frequently updated online personal journal or diary. It is a place to express yourself to the world. A place to share your thoughts and your passions. Really, it's anything you want it to be. For our purposes we'll say that a blog is your own website that you are going to update on an ongoing basis. Blog is a short form for the word weblog and the two words are used interchangeably.



Characteristic of Blog:

- A blog has some form of navigation, usually menus.
- A blog's layout contains a header, footer and content. Usually there is at least one sidebar running beside the content.
- Categories of posts.
- That readers can access the archives, previous posts.
- That a post can contain text and images, (and often video and other media)
- That posts can contain links to other posts, both within blog and to the entire web.
- Should contain a contact page and form.
- Should contain an about page.

Importance of blogging

1. **It builds relationships with visitors (a.k.a. generates potential leads).** These new relationships you acquire may turn into potential leads for your company, and in addition, blogging may also help build stronger relationships with existing customers as it creates loyalty between you and the customers.
2. **It gives added value to your website.** Team members can have an opportunity to contribute to writing blogs about any topic relating to your industry. It will give readers the scoop on what's new, and blogging is a way to keep things fresh.
3. **You develop an authority and a following.** Readers will come back to read your blogs, share and reread if they find your topics relevant.



4. **It communicates your brand image.** This is a way to express your brand identity, and continue to do so with each blog post.
5. **You become a go-to expert in your industry.** Blogging about topics that relate to your senior care industry will make you a credible source when it comes to information.
6. **It increases your search engine rankings.** Blogging increases the chances of your services being found when people are searching online. The more content pages you have on your website, the more likely you are to be found on the search engines--and at a higher place, too!

Why blogging is useful for education?

1. Blogs Allow for Multi-Faceted Learning –

Educators need to teach important materials in several ways because each one of our students learns differently. What's more, we also need to provide students with multiple ways to engage with assignments, based on their individual talents. Blogging is one technique for doing so, as it can allow a quieter student, for example, to feel heard online. Those shy and quiet students feel less pressure when they need to “speak” in their blog or when giving peer feedback, as they are discussing the text on their own terms. Additionally, this journaling format works great with read-and-write learners as well as visual learners.

2. Blogs Promote Literacy and Sharpen Writing Skills –

Bloggng gives students an opportunity to become published authors and showcase their writing skills. In addition, blogs give



students the ability to improve communication and collaboration through the commenting feature. Peer review and feedback become an invaluable part of the writing process. Students from other parts of the world can also comment and provide a new cultural perspective to our own students' thoughts and opinions. Students' writing skills are vastly improved through the blogging process, since they have to work harder to hold the reader's attention. To do that, every word, phrase, sentence, and even punctuation mark must add something to the posting.

3. Blogs Are Accessible and Engaging –

With the availability of blog apps, blogging has become very simple and accessible to our students. They can blog from anywhere about anything whenever they are in the mood to reflect. They are not tied down to a desk and feel more free using this writing media. Also, in the age where every person has a camera in their pocket, we have become a society that journals through photography and video. Along with other multimedia artifacts, blogs become more engaging and almost interactive for the readers.

4. Blogs Can Serve as a Classroom Management Tool –

When used as an in-class assignment, blogs can keep your students on task and focused. The more blogs students post, the more opportunities they have for others to comment on their blog. It's an exciting feeling for students to see proof of someone reading their published work, taking time to reflect on it, and posting their opinion or question. Creating a classroom blog instead of individual blogs fosters an online community for your students to extend the classroom beyond the 4 walls. The learning continues



wherever they go and their thoughts and conversations keep going. Blogging is a great tool to create student portfolios, as it can be used both as a “learning portfolio” and a “showcase portfolio”.

Follow these simple steps to create blog?

- Go to Blogger.
- Click on sign in It's in the upper-right corner of the window. Enter your Google username and password.
- If you don't have a Google Account, click on Create Your Blog. This will take you to a screen where you can create an account to use with Blogger.
- Enter a Display Name and click Continue to Blogger. The display name is the name that your readers will know you by.
- Select a profile type. Click on Create a Google+ profile to create a single account to use across all Google properties. If you'd like to use a pseudonym or limit your exposure on Google, click on Create a limited Blogger profile.
- Follow the online prompts to finish creating your Google+ or limited Blogger profile.
- Click on Create New Blog.
- Type a title for your blog.
- Type a URL for your blog. If it's unavailable try other variations on the name you want to use, but don't use symbols like hyphens, underscores, colons.
- Enter the word verification and click Continue.
- Choose a starter template. This is the basic design and layout of your blog.



- Click on Create blog!.
- Click on Template. It's near the bottom of the menu on the left side of the page. This allows you to customize the look of your blog beyond the elements contained in the starter template.
- Select how to customize the design. Click on Customize if you'd like guided choices. Click on Edit HTML if you're a more advanced user.
- Click on Settings. It's in the center of the menu on the left. From here, you can adjust other settings such as language, whether your blog will be included in search engine results, and whether you're willing to receive emails.
- Click on Posts, comments and sharing. In this menu, you can adjust publishing, comments, and if or how your blog is shared beyond the Blogger platform.
- Click on Basic and then +Add authors. The latter link is in the lower-right corner, under the "Permissions" section of the menu. This setting allows you to add other contributors to the blog, so that the writing burden does not rest on your shoulders, alone.

How to create post?

- Click on New post. It's at the top of the screen.
- Create posts, post edits, and page edits under Posts in the menu on the left side of the screen.
- Enter a post title. Type it into the text box to the right of Post.
- Write your post. Click on Compose to type your post as you would in a typical text editor, which includes functions like different fonts and sizes, text color, and the ability to insert links.



- If you prefer to work in HTML click on HTML.
- Click on Post Settings. It's in the upper-right corner of the window. From this menu, you can enable reader comments, select HTML settings, and post the time and date. Click on Done when you've made your changes.
- Click on Save. Doing so saves your work, so far. Click on Preview to see what your post will look like when it's finished. Click on Publish to take it live for your audience.

Do's & Don'ts Of Blogger

- Make sure your site is mobile responsive
- Do make your blog's purpose immediately apparent
- Use lots of whitespace
- Do keep your header height minimal
- Do make navigation clear and obvious
- Don't have auto-play music / videos / ads on your blog
- Do put a contact link, button or page on your blog
- Do look at your blog from a reader's point of view
- Don't use light text on a dark background

* * *

Unit 6 Introduction to E-commerce

Aim: You will learn about -

- E-commerce in india
- Online transaction
- E commerce best practises
- Digital india .

Learning Outcomes:

- What is e commerce
- What is the scope of e commerce in India
- What are the do's & don'ts of E commerce
- Features of digital India

What is E Commerce?

E Commerce stands for electronic commerce and caters to trading in goods and services through the electronic medium such as internet, mobile or any other computer network. It involves the use of Information and Communication Technology (ICT) and Electronic Funds Transfer (EFT) in making commerce between consumers and organizations, organization and organization or consumer and consumer. With the growing use of internet worldwide, Electronic Data Interchange (EDI) has also increased in humungous amounts



and so has flourished e-commerce with the prolific virtual internet bazaar inside the digital world which is rightly termed as e-malls.

Classification of E-commerce Business Based on Nature of Participants

The two most common participants in e-commerce are businesses and consumers.

Based on this we can come up with four primary e-commerce types:

1. Business to Business E-commerce (B2B E-commerce)

In this type of e-commerce, both participants are businesses. As a result, the volume and value of B2B e-commerce can be huge. An example of business to business e-commerce could be a manufacturer of gadgets sourcing components online.

2. Business to Consumer Ecommerce (B2C Ecommerce)

When we hear the term e-commerce, most people think of B2C e-commerce. That is why a name like Amazon.in pops up in most discussions about e-commerce. Elimination of the need for physical stores is the biggest rationale for business to consumer e-commerce. But the complexity and cost of logistics can be a barrier to B2C e-commerce growth.

3. Consumer to Business Ecommerce (C2B E-commerce)

On the face of it, C2B e-commerce seems lopsided. But online commerce has empowered consumers to originate requirements that businesses fulfill. An example of this could be a job board where a consumer places her requirements and multiple companies bid for winning the project. Another example would be a consumer posting his requirements of a holiday package, and various tour operators making offers.



4. Consumer to Consumer Ecommerce (C2C E-commerce)

The moment you think of C2C e-commerce olx.com comes to mind. That is because it is the most popular platform that enables consumers to sell to other consumers. Since olx.com is a business, this form of e-commerce could also be called C2B2C e-commerce (consumer to business to consumer e-commerce).

That is not all. Employees can be regarded as a special type of consumer. That would give rise to a new type of e-commerce: B2E (Business to Employee e-commerce).

Likewise if we consider Government to be separate entity, as also Citizens, we can come up with many more types of e-commerce: B2G (Business to Government), G2B (Government to Business), G2E (Government to Employee), G2G (Government to Government), G2C (Government to Citizen), C2G (Citizen to Government).

Setting up shop on Facebook is a fast-growing e-commerce segment so it has been awarded its very own bit of jargon: f-commerce. Likewise, m-commerce stands for mobile e-commerce.

E commerce in India

India had an internet user base of about 354 million as of June 2015 and is expected to cross 500 million in 2016. Despite being the second-largest user base in world, the penetration of e-commerce is low compared to markets like the United States or France, but is growing at an unprecedented rate, adding around 6 million new entrants every month. The industry consensus is that growth is at an inflection point. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities.



Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorised distributors and e-commerce offerings.

Market size and growth

According to a study conducted by the Internet and Mobile Association of India, the e-commerce sector is estimated to reach Rs. 211,005 crore by December 2016. The study also stated that online travel accounts for 61% of the e-commerce market.

By 2020, India is expected to generate \$100 billion online retail revenue out of which \$35 billion will be through fashion e-commerce. Online apparel sales are set to grow four times in coming years.

Online Transaction

WHAT IS Online Transaction:

An **online transaction**, also known as a PIN-debit transaction, is a password-protected payment method that authorizes a transfer of funds over an electronic funds transfer (EFT)

HOW IT WORKS (EXAMPLE):

When you pay for goods or services with your debit card, you have an option for the payment to be processed in two different ways: as an offline transaction via a credit card processing network, or as an online transaction via an EFT system, requiring a personal identification number (PIN) to complete the process.

When processed as an *online transaction*, the exchange of funds is



completed using an EFT network, such as Star, Pulse or Interlink, depending on which EFT system your bank is associated with as a member bank. The cost of the transaction typically amounts to an interchange fee of 1% of the total purchase price, which is charged to the vendor/merchant.

On line transaction process concerns about concurrency and atomicity. Concurrency controls guarantee that two users accessing the same data in the database system will not be able to change that data or the user has to wait until the other user has finished processing, before changing that piece of data. Atomicity controls guarantee that all the steps in transaction are completed successfully as a group. That is, if any steps between the transaction fail, all other steps must fail also.

What is RTGS ?

The full form of RTGS is "Real Time Gross Settlement". RTGS can be defined as "the continuous (real-time) settlement of funds transfers individually on an order by order basis.

What do you mean by Real Time? What is the Meaning of Gross Settlement?

Here the words 'Real Time' refers to the process of instructions that are executed at the time they are received, rather than at some later time. On the other hand, "Gross Settlement" means the settlement of funds transfer instructions occurs individually (on an instruction by instruction basis). The settlement of funds actually takes place in the books of RBI and thus the payments are considered as final and irrevocable



What is NEFT ?

The full form of NEFT is "National Electronic Funds Transfer (NEFT). The NEFT is a nation wide payment system facilitating one-to-one funds transfer. Under this system, individuals, firms and corporates can electronically transfer funds from any bank branch to any individual, firm or corporate having an account with any other bank branch in the country participating in the system.

RTGS vs NEFT

Thus, we can say that both RTGS and NEFT are schemes started by RBI for the benefit of the customers which allow accounts holders in the banks to electronically transfer the funds intra-bank. In the case of RTGS, settlement is on 'Real Time' basis whereas in case of NEFT the settlement is on batch basis and net basis. There are some other rules, regulations and differences, which we will be discussing below:-

What are the minimum and maximum amount of remittance under RTGS and NEFT?

NEFT	RTGS	
No minimum limit	Rs.2 lakhs	Minimum Amount:
No upper ceiling	No upper ceiling	Maximum Amount :

(However, maximum amount per transaction is limited to Rs.50,000/- for cash-based remittances and remittances to Nepal.)

E-Commerce Best Practices:

1. Click and collect: click and collect is an ideal way to tie up your ecommerce business with your offline presence, achieving the



holy-grail we like to call 'multichannel'. For the customer it gives them almost complete control over delivery as they can pick up purchases when and where they choose. Here's what we learnt about click and collect this Christmas.

2. Free delivery: being clear on your free delivery threshold is a must for all ecommerce stores. You'll be surprised how many spend more money just to qualify. Stats from a UPS study show that 58% of customers have added extra items to their shopping basket in order to qualify for free delivery.
3. Free returns: far too many ecommerce stores hide their returns policy behind multiple links, hidden at the bottom of the screen. Here Hobbycraft proudly displays the fact that returns are available online and in-store (another key to multichannel success) and just as importantly, are free.
4. Basket: having a nice clear basket, kept in the top-right corner is an obvious must-have, as is indicating how many items are currently in the bag. Hobbycraft also keeps the item in your bag after you've left the store. Check out how 10 top UK retailers present returns information.

Search boxes and functionality

There's more to search box and site search functionality than you may think.

The placement and design of search boxes can make a difference to usage, while the addition of certain features makes for a better search experience.

Make the search box easy to spot

The prominence of the search box on the page can influence the user's decision to make use of it to find products.



Therefore, if site search is important to your site, the prominence and visibility of the search field should reflect this.

Some sites, perhaps to maintain the clean design, tend to make their search boxes harder to spot, as in this example from Zara.

It's very subtle and could easily be overlooked. The only mitigating factor is that it is not crowded out by other navigational elements at the top of the page.

It's also a very interesting and unusual search function, as we explored in this article.

By contrast John Lewis, which places much importance on site search, makes its search box impossible to miss.

Make the search box big enough for typical queries

The need for this will vary from site to site, depending on the types of product stocked, but it's important that search boxes are big enough to fit most queries.

For example, searches for things like electrical products which have long product codes can be harder when the text starts to disappear.

This means that users are less able to review the search term for mistakes as they type and makes it harder to edit it.

By contrast Amazon can handle the same lengthy product description with space to spare. Vital for a retailer with such a wide product range.

Use autocomplete for site search

This is a very useful feature which improves the search experience by reducing the work that users need to do.

As users type, products are suggested. If sites are smart enough, then



these suggestions will reflect site search data and serve the most likely products first.

The use of images provides a visual appeal but also allows the user to check the products very quickly.

Autocomplete also helps when users may be unsure of spellings. This ensures that users find the product they need.

In this case, if you're not sure how to spell the name of the Russian author of *The Gulag Archipelago*, help is at hand. This is also very useful on travel sites for the same reason.

Use auto-complete for merchandising Auto-complete is very useful to help customers find the search term they want, and to avoid issues like misspellings, but it also offers opportunities for merchandising. Here, as the site search sees that I'm looking for a wine gift basket, it starts to recommend products, complete with price, image and a snippet of text. Site search data can be used to identify which products are most likely to appeal to searchers. Allow users to search within a particular department

This helps users to narrow their search from the very beginning, making it more likely they'll find what they need quickly. It's a great idea for sites with lots of products, like Newegg:

Place text in search box to encourage searches. The text prompts the users to search and also suggests the kinds of things they may look for.

Make the text disappear

Retailers should also use JavaScript to ensure that the default text in the box disappears as users click to enter their own search term.

Don't force them to delete the text before they can begin, as this is incredibly annoying.



Place a site search box on each page of the site

Having a search box on each page makes it easy for customers to get back to a product search from any point, and also provides an alternative method of navigation for users that arrive at product pages.

However, placing a site search box within the checkout process can provide a distraction for customers when they should be concentrating on making a purchase, so this is one area that doesn't need one.

Allow users to search using product codes

This is a good option for retailers with magazines and catalogues, and these searches imply a real intent to purchase.

Search results

The quality of search results is all-important.

They should be accurate and relevant to the user's query, while the presentation of those results can have an influence on whether the visitor decides to buy

Accuracy

This depends on product labelling and metadata, but users will lose faith if results are a bit wonky. Here, I search for blue shirts and this is exactly what I get.

Avoid zero results pages

This can be avoided easily by using autocomplete, which ensures that customers enter a relevant search to begin with.

If no autocomplete is present, the aim should be to avoid a dead end for users.



House of Fraser achieves this by showing results for almost every search. It also retains the search term and search boxes so users can easily amend the search or start again.

Throw in some social proof

Social proof can work very well, so why not use it within search results?

On Booking.com I'm given review scores while the top result tells me there's just one room left and that 21 people are looking at this hotel.

Show non-product results

People aren't always searching for products. They may be looking for customer services, or perhaps buyer's and how-to guides.

Here, Boden shows results from the help sections as well as style and fit guides.

Allow users to choose the way results are displayed

Allowing the user to select different views of results allows them to tailor their own search results.

Use reviews as filters

Very useful. Reviews are powerful on product pages, so why not use them in other ways?

Filtering options

An absolute essential. Users need to be able to narrow down their searches using a variety of means to filter the product selection.



These include:

- Product category.
- Price range.
- Size.
- Brand.
- Colour.
- User ratings.

In general, the more filtering options the better, though this will depend on the size of the product range.

Here, AO.com has a comprehensive set of filters which help the user to narrow their search.

Sorting options

Sorting options allow the user to change the order of search results so they can view the most relevant results first.

This may be by price, showing the cheapest or more expensive first, or ordering results by relevance to the search query.

Handle common misspellings

Sheela handles my typo on iPod well, serving results as if the mistake didn't happen:

Make it easy for users to find products with synonyms

This is something that site search, and 'no results found' searches can tell you. Perhaps there is a common misspelling, or users are searching for a brand you don't stock.



If so, rather than showing no results at all, serve up results that are related to the search term.

Show results in colour

Perhaps you have products in multiple colours. If a customer searches in this way, show it in that colour.

Show the search query on the results page

Showing the search term provides an instant reminder to the customer, but also allows them to append or remove words from the search in order to produce more accurate results.

Provide quick view options

Site search users often have a clear intent to purchase, and are more likely to convert than the average visitor.

The key here is to remove as many obstacles as possible from the purchase journey.

Quick view allows users to see a mini version of the product page and an add to basket button without having to load the page.

Digital India:

Digital India is a campaign launched by the Government of India to ensure that Government services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology.



It was launched on 1 July 2015 by Prime Minister Narendra Modi. The initiative includes plans to connect rural areas with high-speed internet networks. Digital India consists of three core components. These include:

- The creation of digital infrastructure
- Delivery of services digitally
- Digital literacy

What is Digital India?

- Digital India is a Programme to prepare India for a knowledge future.
- The focus is on being transformative – to realize IT + IT = IT
- The focus is on making technology central to enabling change.
- It is an Umbrella Programme – covering many departments.
- It weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them is seen as part of a larger goal.
- Each individual element stands on its own. But is also part of the larger picture.
- It is coordinated by DeitY, implemented by the entire government.
- The weaving together makes the Mission transformative in totality–

The Programme:–

- Pulls together many existing schemes.
- These schemes will be restructured and refocused.
- They will be implemented in a synchronized manner.



- Many elements are only process improvements with minimal cost.

The Government of India hopes to achieve growth on multiple fronts with the Digital India Programme. Specifically, the government aims to target nine 'Pillars of the Digital India' that they identify as being:

1. Broadband Highway
2. Universal access to Internet
3. Public Internet Access Programme
4. e-Governance – Reforming Government through Technology
5. e-Kranti - Electronic delivery of services
6. Information for All
7. Electronics Manufacturing
8. IT for Jobs
9. Early Harvest Programmes

Services

Some of the facilities which will be provided through this initiative are Digital Locker, e-education, e-health, e-sign and national scholarship portal. As the part of Digital India, Indian government planned to launch Botnet cleaning centers.

DigiLocker

Digital Locker facility will help citizens to digitally store their important documents like PAN card, passport, mark sheets and degree certificates. Digital Locker will provide secure access to Government issued documents. It uses authenticity services provided by Aadhaar. It is aimed at eliminating the use of physical documents



and enables the sharing of verified electronic documents across government agencies. Three key stakeholders of DigiLocker are Citizen, Issuer and requester.

Attendance.gov.in

Attendance.gov.in is a website, launched by PM Narendra Modi on 1 July 2015[3] to keep a record of the attendance of Government employees on a real-time basis. This initiative started with implementation of a common Biometric Attendance System (BAS) in the central government offices located in Delhi.

MyGov.in

MyGov.in is a platform to share inputs and ideas on matters of policy and governance. It is a platform for citizen engagement in governance, through a "Discuss", "Do" and "Disseminate" approach.

SBM Mobile app

Swachh Bharat Mission (SBM) Mobile app is being used by people and Government organisations for achieving Shreyank the goals of *Swachh Bharat* Mission.

eSign framework

eSign framework allows citizens to digitally sign a document online using Aadhaar authentication.^[5]

e-Hospital

The eHospital application provides important services such as online registration, payment of fees and appointment, online diagnostic reports, enquiring availability of blood online etc.



National Scholarship Portal

National Scholarship Portal is a one step solution for end to end scholarship process right from submission of student application, verification, sanction and disbursal to end beneficiary for all the scholarships provided by the Government of India

e-Sampark

e-Sampark is a mechanism to contact citizens electronically, sending informational and public service messages via e-mails, SMSs and outbound dialing.

* * *

Unit 7 World of Open Source Software

Aim: You will learn about -

- Introduction to open source software
- Advantages of open source software
- Some popular open source software & their uses

Learning Outcomes:

- What are Open source software
- Advantages of open source software
- Some popular open source software & their uses

Introduction to Open Source Software:

- Open source software is software with source code that anyone can inspect, modify, and enhance. Open-source software (OSS) is computer software with its source code made available with a license in which the copyright holder provides the rights to study, change, and distribute the software to anyone and for any purpose.
- "Source code" is the part of software that most computer users don't ever see; it's the code computer programmers can manipulate to change how a piece of software—a "program" or "application"—works.



- Open source software is usually developed as a public collaboration and made freely available.

Advantages:

1. High-quality software

Open source software is mostly high-quality software. When you use the open source software, the source code is available. Most open source software are well-designed. Open source software can also be efficiently used in coding. These reasons make open source software an ideal choice for organizations.

2. Lesser hardware costs

Since Linux and open source solutions are easily portable and compressed, it takes lesser hardware power to carry out the same tasks when compared to the hardware power it takes on servers, such as, Solaris, Windows or workstations.

3. No vendor lock-in

Using open source software also means you are not locked into using a particular vendor's system that only work with their other systems.

4. Integrated management

By using open source software, you can benefit from integrated management. Open source software uses technologies, such as,



common information model (CIM) and web based enterprise management (WBEM). These high-end technologies enable you to integrate and combine server, application, service and workstation management. This integration would result in efficient administration.

5. Simple license management

When you use open source software, you would no longer need to worry about licenses. Open source software enables you to install it several times and also use it from any location. You will be free from monitoring, tracking or counting license compliance.

6. Lower software costs

Using open source software can help you minimize your expenses. You can save on licensing fees and maintenance fees. The only expenses that you would encounter would be expenditure for documentation, media and support.

7. Abundant support

You will get ample support when you use open source software. Open source support is mostly freely available and can be easily accessed through online communities. There are also many software companies that provide free online help and also varied levels of paid support. Most organization who create open source software solutions also provide maintenance and support.



8. Scaling and consolidating

Linux and open source software can be easily scaled. With varied options for clustering, load balancing and open source applications, such as email and database, you can enable your organization to either scale up and achieve higher growth or consolidate and achieve more with less.

Popular Open Source Applications and their uses:

Among thousands of Open source software projects these are few Open Source Softwares listed below are the most important and valuable. These are rare software product that has no alternatives and must require.

1) Linux kernel

The Linux kernel is a prominent example of free and open source software. It is a Unix-like operating system released under the GNU General Public License version (GPLv2). Linux wasn't the first open source software project, but it was the powerful community developed by contributors worldwide. The Linux kernel is used by a variety of operating systems based on it, which are usually in the form of Linux distributions. The popularity of Linux Kernel rapidly accumulated developers and users who adopted code from other free software projects for use with the new operating system.

2) GNU Utilities and Compilers

The GNU Project is the flagship of the free software movement



and Compiler Collection, which is also named as GNU Compiler Collection (GCC) which is developed by the GNU Project supporting various programming languages. The Free Software Foundation (FSF) distributes GCC under the GNU General Public License (GNU GPL), which is the source of an amazing variety of tools and utilities that, when combined with the Linux kernel, provide a complete operating system.

3) Ubuntu

Ubuntu is a Debian-based Linux operating system developed to increase usability and ease of use. Ubuntu is a free software and named after the Southern African philosophy of Ubuntu (literally, "humanness"), which often is translated as "humanity towards others" or "the belief in a universal bond of sharing that connects all humanity". Ubuntu is the first choice of novice users and PC sellers because its free and no need to pay fees. The Ubuntu project is publicly committed to the principles of open source development; people are encouraged to use free software, study how it works, improve upon it, and distribute it.

4) BSD Operating Systems

Linux isn't the only popular free open source operating system, there are a number of Unix-like operating systems under active development, named behind BSD (Berkeley Software Distribution). FreeBSD, NetBSD and OpenBSD are very famous examples of the BSDs.

OpenBSD is touted as perhaps the most secure Unix-like



operating system, with a security audit that never stops. It includes a number of security features absent or optional in other operating systems and has a tradition of developing auditing the source code for software bugs and security problems.

5) Samba

Samba is Free Software licensed under the GNU General Public License, the Samba project is a member of the Software Freedom Conservancy. Samba is a free software re-implementation of the SMB/CIFS networking protocol, originally developed by Andrew Tridgell. Samba bridges the gaps between Linux/Unix and Windows, allowing Unix and Linux servers to provide file and print services to Windows clients, and Linux and Unix clients work with Windows file servers. A Samba host can even serve as the primary domain controller for a Windows network. Samba provides file and print services for various Microsoft Windows clients and can integrate with a Windows Server domain, either as a Primary Domain Controller (PDC) or as a domain member. S

6) MySQL

The world's most popular open source database with easy administration, excellent read performance, and transparent support for large text and binary objects make it the top choice for many Web sites. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. Applications which use MySQL databases include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software.



7) BIND

BIND is the most popular open source DNS (Domain Name System) server software on the Internet. It works on Unix-like operating systems, it is the de facto standard that implements DNS protocols for the Internet. The Berkeley Internet Name Domain package was originally written at the University of California at Berkeley. The software consists, most prominently, of the DNS server component, called contracted for name daemon. In addition the suite contains various administration tools, and a DNS resolver interface library. The latest version of BIND is BIND 9, first released in 2000.

8) Sendmail

Sendmail is a general purpose internet network e mail routing facility born before the Internet was standardized and supports different kinds of mail-transfer and delivery methods, including the Simple Mail Transfer Protocol (SMTP) used for email transport over the Internet. Sendmail served as the backbone of the Internet mail system throughout the 1980s and 1990s. It has lost ground to Postfix, Qmail, Exim, and Microsoft Exchange in recent years, but still ranks among the most popular MTAs (mail transfer agents). It is a well-known project of the free and open source software and Unix communities. It has spread both as free software and proprietary software.

9) Apache

The Apache HTTP Server Project is an effort to develop and



maintain an open-source HTTP server for modern operating systems including UNIX and Windows. The Web server that puts the A in LAMP is still fast, flexible, and secure, with broad operating system and Web programming language support and hundreds of modules available to extend the functionality. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. The goal of this project is to provide a secure, efficient and extensible server that provides HTTP services in sync with the current HTTP standards.

Some popular organisation who uses Linux platform.

1. Google

Google, an American based multinational company, the services of which includes search, cloud computing and online advertising technologies runs on Linux.

2. Twitter

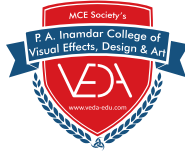
Twitter, famous online social networking and microblogging site that is Powered by nix.

3. Facebook

Facebook, one of the most famous and most widely used Social Networking service runs on the same platform.

4. Amazon


An American based international company which deals with International Online Retailing is in the list of Linux powered Company.



Global Certifications



Do it from anywhere - anytime
As per your convenience

 +91 888 880 8544/ 855 096 6911

 www.itolympiad.in





5. IBM

IBM (International Business Machine Corporation) the American based company which for sure don't requires any introduction, is again powered by nix.

6. McDonalds

The world's largest chain of hamburger fast foot restaurant uses GNU/Linux (Ubuntu) too.

7. Submarines

The submarines in the United State Navy are controlled by same platform.

8. NASA

National Aeronautical and Space Administration, The United nation's Space program widely used Linux in many of their programmes.

9. Watches

Most of you would not be knowing that there are Linux Powered Watches in the market, already. The watch developed by IBM running Linux.

10. Mobile Devices

True, you all know that Linux is powering Mobile Phones, Tablets and Kindle. If the news is true, Nokia is all set to come with its First Android based Mobile (Though the decision of Nokia is too late and Nokia has paid for this and still paying).

* * *