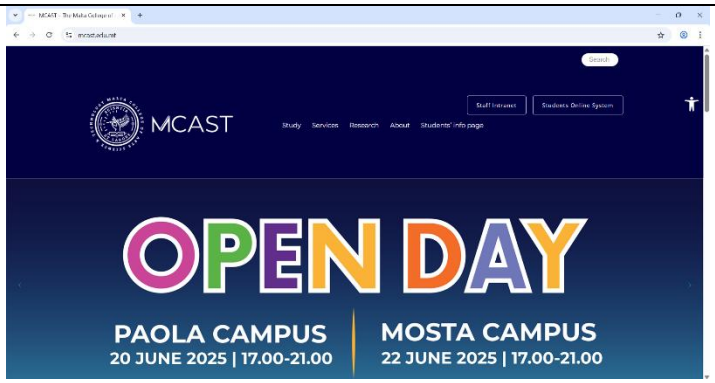
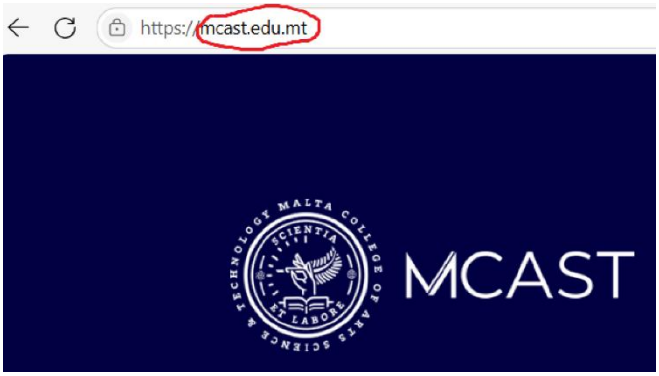
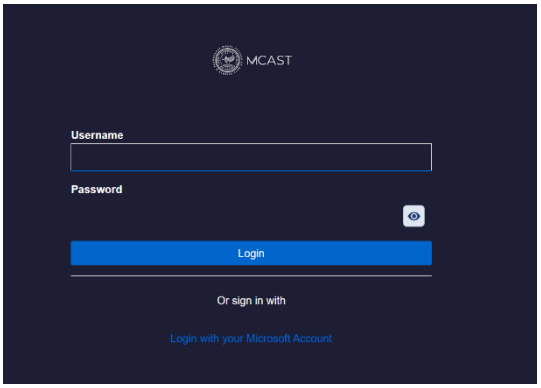
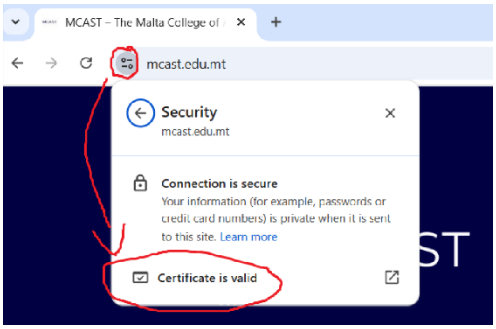
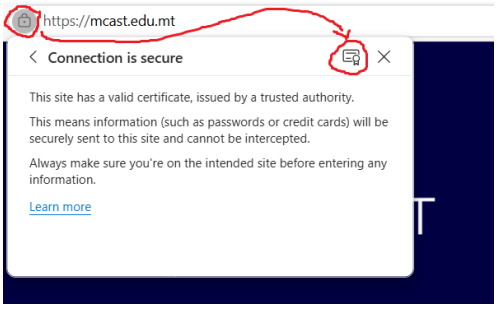
Website Design Task 1a: Glossary of the basics

Web Server	A web server contains two things. Either Hardware or Software. Or in some cases you may have both working together. The Hardware part of a web server refers to a computer which contains web server software and a website's component files. Some examples include HTML documents, images, CSS stylesheets and JavaScript files. Web servers should be able to connect to the Internet and swap physical data with other devices that connect with the web. The Software part of a web server involves multiple sections that help control how users can access hosted files. Such as via HTTP. When a browser requires a file which is being hosted on a web server. It will request the file through HTTP. Once it achieves the correct web server, the HTTP server begins by accepting the request, then finding the requested document and later on will send it back to the browser via http. If the server fails to find the requested document, a 404 response pops up showing that something went wrong.	 The MCAST website itself is located on a web server as it holds anything that compiles the website itself (ex-hardware or software). Because the MCAST website is found on a web server. This means that its accessible to everyone who wants to see the website itself.
Web Hosting	Web hosting offers an area to store online content securely. Things that make up a website (code, text, images and videos) are all stored there. Without a stable digital repository, we wouldn't be able to gain any access to content on the web. This shows us that hosting is a crucial part of developing an online	Web hosting allows users to make the website accessible via the internet. This can include storing files, codes, images and videos. On the MCAST Website the only example I can find that may have to do with web hosting is when you apply to continue a course, doing so will help store the data you provided onto the website itself. I do believe that the MCAST website should be more

	presence for anyone. This also gives users the ability to store content offsite, reducing the expenses and space required for storing data locally, and the physical footprint associated with it. it's said to be easier to build a durable web presence with the use of backups for security and support. Web hosting services function by consistently keeping up with the stability and security of the storage spaces. Although web hosts give more than just data storage. It is also a core part that helps them to function. Hosts load up their data on hardware (also known as web servers) as this makes it easier for maintenance and makes it accessible by online users.	accessible for its users as there isn't much to say in regard to web hosting.
IP Address	IP Address stands for Internet Protocol Address. It is known as a label which websites and servers would be assigned to. IP Addresses may be found on other digital devices such as computers, printers, modems or even routers. All devices utilize this identifier to transfer and get back data from other devices in which have connections to the internet. This process is compared to when you send and mail to a person and getting the return address. IP addresses are necessary for packet-switching technology. Because of this, data can be split into smaller pieces (Packets). They transfer the requested data and routing information including the IP's destination. The information is essential for these packets because it helps them know where they're going. Though it is also important due to the fact that it enables several packets to be in transmission through different routes across a	The IP Address serves as a label which would be assigned to servers and other websites. This helps transferring and receiving back data from other devices. while its not visibly shown, the MCAST website also has a distinct IP Address. The way this works is that when a user clicks any links that lead to the website. the web servers will find the numeric address and once found, it will open the page.

	network and will manage to arrive at the right destination efficiently. In other words, IP addresses make data transferring quick and efficient.	
Domain Name	The Domain Name serves to help others find and/or remember where a business may be found on the internet. The domain name is seen between the @ and either .com, .net etc. so it would be for example "johndoe@mailchimp.com" Domain names function with the use of an IP address in order to locate specific websites on the internet. Although an IP address is just a string of numbers which makes it very hard for others to remember. Thanks to the Domain Name System (DNS) it has made it easier for others to remember the addresses.	 The Domain name for the MCAST website is in the URL between the sub domain and the extension. People who want to know more about MCAST in general will write down the domain name on the search engine as the domain name acts as a tool to help others remember names of businesses. and then it will track down the IP of the MCAST website.
DNS	I had mentioned it briefly above. DNS stands for Domain Name System; it is known as the "phonebook of the Internet". People gain access to information via domain names. While web browsers engage via IP Addresses the DNS's role is to convert domain names to IP Addresses, that way browsers will be able to load Internet resources. DNS servers grab URLS and other Domain names and then they'd convert them into IP Addresses so that it makes it easier for computers to understand and use. It begins by translating texts written by the user in a browser, into something that the machine will be able to use to retrieve a webpage. The translation and lookup process is known as DNS resolution.	You can't visibly see how it works on the MCAST website because as I mentioned, its job is to convert domain names into IP Addresses so it's easier for computers to read. The way this is used on the MCAST website is that it grabs the website's URL and then converts the domain name provided, into an IP address so it lifts off the heavy weight for the computer to understand where the webpage is located. Once the computer has taken note of the IP Address, it will locate the webpage on the internet and find the MCAST Website.

HTTP/HTTPS Protocol	HyperText Transfer Protocol Secure (HTTPS) is a common protocol used to deliver data between web browsers and websites. HTTP is also used for a similar purpose though HTTPS is a more secure version of HTTP, due to the extra security added it makes sure that any data you're transferring will remain encrypted. Any website that needs you to log in should use https, one key giveaway to knowing if the page is secure is with the padlock icon in the URL bar. if a website doesn't have a lock, It means it's a non HTTPS website and will be marked as "Not Secure" on Browsers like Google Chrome. HTTPS conveniently uses the HTTP protocol but then puts SSL/TLS on top of it. regarding the workflow between HTTPS and HTTP remain equal. The browsers and servers continue communicating with each other using the http protocol, though it's done over a secure SSL connection.	 The HTTP/HTTPS (in this case we'll stick to HTTPS) can be found at the very beginning of the url. You may see it more visible on browsers like google or edge. Since its HTTPS it means that the MCAST website is more secure, this can be shown with the padlock next to it.  For example, if you look at the "Staff Intranet" section you will see a login section where it requires you to enter your Username and Password. By entering the information you provided, it will be sent to the MCAST website securely and therefore cannot be intercepted whatsoever.

SSL/TLS Certificate	SSL and TLS stands for Secure Sockets Layer and Transport Layer Security. The SSL/TLS certificate refers to a digital object that gives systems the permission to verify the identity and eventually it will sustain an encrypted network connection towards another system using the SSL/TLS protocol. These Certificate are utilized among a cryptographic system referred to as a public key infrastructure (PKI). This helps us by giving us the ability for one party to confirm the identity of another party with the use of the certificate if both trust a third-party which is referred to as a certificate authority. SSL/TLS certificate are as if you have digital identity cards that help with security regarding network communications, demonstrating identities of websites over the internet and resources regarding private networks. Browsers will utilize the SSL/TLS certificate as a beginning to secure connections with web servers via SSL/TLS handshake. This is part of the HTTPS communication technology as it is a combination of both HTTP and SSL/TLS. As stated, HTTP is a protocol used by web browsers to give out information in a simplified format to a web server. HTTP will pass on unencrypted data, meaning that regarding any information being sent from a browser may be blocked and read by third parties. To fully secure this communication they with either use HTTP with SSL/TLS or HTTPS as stated.	  For browsers like Chrome, you can access the certificate by clicking on the icon shown above but for browsers like Google, you click the padlock to access the certificate. Either or you will find it under the “connection is secure” category as it is the reason for it. the Certificate serves as digital proof that the MCAST Website had been published and reviewed by Administrations or other Authorities therefore showing that the Certificate is Valid.

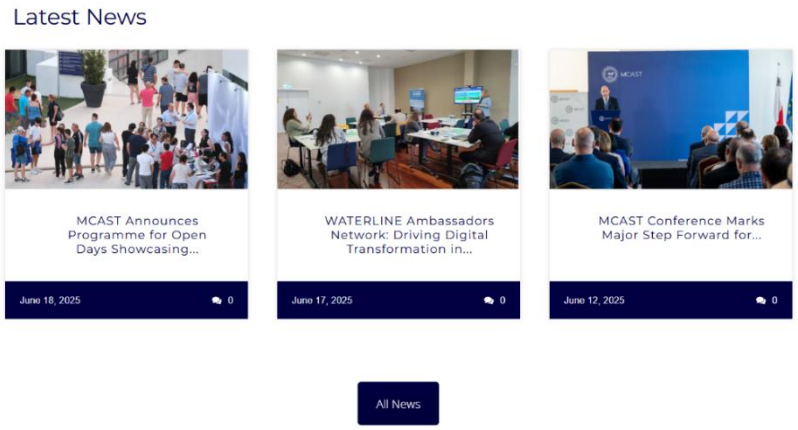
Website Design Task 1b: Internet Services

Service 1: Content Distribution Network

Based on research I've noticed that one of the Internet Services that the MCAST Website uses, Is the Content Distribution Network.

It's Function

What content distribution does is that the content you provide will be shared and even promoted across multiple different platforms as a way to reach out to specific target audiences. This makes it so that its engaging, visible and impacted with the use of communication channels such as video content, emails and even websites. When you scroll down on the MCAST website, you will find the latest news showcasing what's happening around MCAST



It's Value

It is valuable to users or administrators because it helps keep everyone up to date with what may happen around MCAST such as what issues may arise, what to be wary of and what precautions we should all take to ensure safety from danger. Or for those who may be starting their journey into MCAST, they might be curious and want to see what happens at MCAST or what to expect from it.

One Improvement

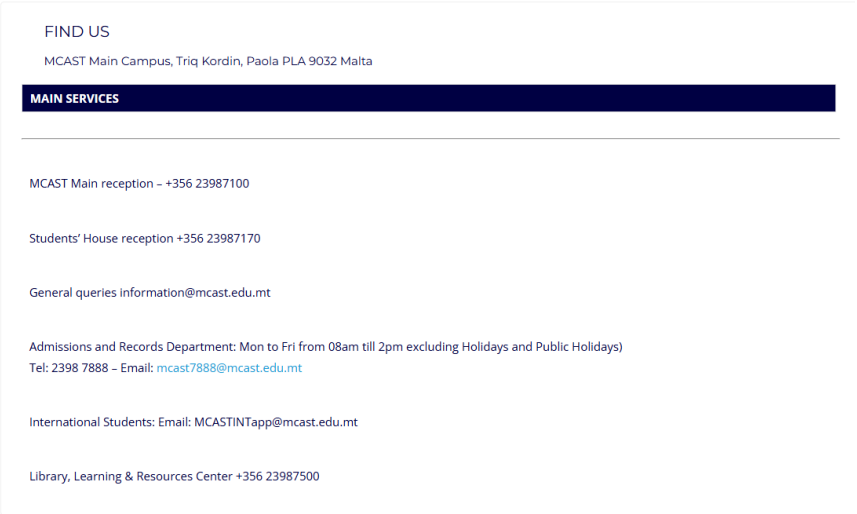
I think a way that content distribution could be used more is by having a section in the website featuring student's work. In a way this not only puts respect on the artistic side of MCAST but it may also help students with gaining inspiration for assignments or even for other projects.

Service 2: Communication Service

I believe that another internet service that the MCAST Website uses is Communication Service.

It’s Function

What Communication Service does is that it pushes businesses to connect with the outside world. Businesses will struggle in isolation which is why its needed to make connections with others to give ideas and information. For the MCAST Website this can be seen under the contacts page where there’s several ways you can contact MCAST Institutes though I’m only showing the main services they’ve provided.



It’s Value

It is valuable to users because many students may have issues regarding stipend and need someone to help guide them or see how they can fix it. Moreover it may also be useful to those who are starting their course at MCAST for the first time since they might contact the main services first for help, especially regarding the courses they may have to offer and how long the years are. This also is useful for students who have graduated a previous year and may need help in how to get their certificate.

One Improvement

in terms of finding the contacts. Despite it being crucial for those who want to know more about MCAST, it sure is placed in an area where you can barely notice it. What I’d say is that the contact us section should be placed somewhere in the beginning of the website so it can be more prominent, and people can easily access it without having to search through small texts in a blue box.

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