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| Qualification: | Diploma of Web Development | | | | |
| Unit Code and Title: | ICTICT514 – Identify and manage the implementation of current industry-specific technologies | | | | |
| Trainers’ Name: | Ida Ho | | | | |
| Assignment Details | | | | | |
| Due Date: |  | Assessment No:  (If applicable) |  | | |
| Date Submitted: | 04/02/2021 | | | | |
| Checklist | | | | | |
| * I have kept a copy of my assignment before submitting * I have completed and signed this page * I have answered all questions in the assignment * I have attached any relevant evidence/documentation, as required for the assessment | | | | | |
| Declaration | | | | | |
| I have been advised of the assessment requirements and have been made aware of my rights and responsibilities as an assessment candidate.  I declare that, to the best of my knowledge and belief, this assignment is my own work, all sources have been properly acknowledged, and the assignment contains no plagiarism. This assignment or any part thereof has not previously been submitted for assessment **at this or any other RTO**. | | | | | |
| Student’s signature:  Alessandro Ferro | | Date:  04/02/2021 | | | |
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| **Assessment Feedback** | | | | |
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| **Result** | **Satisfactory** | **Not Satisfactory** | **RPL** | **RCC** |
| **NYC – New assessment date scheduled or FIR – Further information Required** | | | **Date:** | |
| Trainers/Assessors signature: | | | Date: | |
| **Student Comments** | | | | |
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| * I have received my assessment result and am satisfied with the feedback given on this assessment | | | | |
| Student’s signature: | | | Date: | |

Q1.1

Research three latest and current industry tools used for website development

**Answer**

1. HTML5 – The latest version of the Hypertext Markup Language. It is the modern standard for structuring web pages. It can be processed by virtually any current web browser and it consists of “tags”, or elements that are interpreted by browser to display content on a web page.

Some of the most notable features of HTML5 are:

* Semantics: allow a more precise definition of the content, making it easier to organize different elements on a page.
* Connectivity: Facilitate and implement new methods of communication between client and server.
* Offline and storage: Client side local storage improves performances, allow for some degree of offline operativity and gives access to a virtually safe browser specific storage.
* Multimedia: Implement better manipulation of audio and video elements and browser supported Real-Time Communication.
* 2D/3D graphics and effects: Drawings, graphs and 3D imaging and creation are supported natively thanks to the canvas elemen. SVG files can be embedded and manupulted directly in the HTML, giving virtually total freedom to designers.
* Performance and integration: With a carefully integrated layer of abstraction between the inner workings of most browsers and how developer can manipulate them, HTML5 simplifies the creation of more complex and powerful web applications, while improving the browser perfomrnaces.
* Device access: HTML5 natively implements features that enable its usage on multiple devices.
* Styling: On top the styling features implementd directly in the markup, HTML5 can be styled using CSS3.

1. SaaS – Software as a Service (SaaS) is a distribution model in which a software application is delivered “on demand”

Whereas in the past most organizations had to develop, implement and maintain their own applications, with all the related costs, nowdays the SaaS model allows to use software made available on the cloud by third party companies, paying just for the effective usage. All the costs related to development, testing, and maintenance of the application, are dealt with by the company that created it, and by paying a fee, often in the form of a subscription, any other company that need the functionalities provided by that application, can implement them without any overhead.

This payment model comes with the advantage that a company knows beforhand the exact cost of using the software and can therefore plan accordingly. This can be especially important when considering how often the cost of developing a software product largely surpass the initial estimations.

Another advantage is the availability of the application on the internet, making it reachable by virtually any device with an online connection.

1. Javascript – Born as a scriptiing langage to implement some interactivity and animations on web pages, Javascript soon evolved to be capable of much more.

One of the first game-changing implementations of Javascript is represented by Ajax. With its ability to manipulate the DOM, Javascript started to be used to asynchronously modify elements of the web page in reaction to the users interactions, without needing to wait for a response from the server, dealing instead with the communication with the server behind the scenes.

During the 25 years of its existence, Javascript has been used as the base to develop several frameworks, with some of them becoming industry standards, so widespread that many developers can be proficient in the use of these frameworks, without actually know plain and simple Javascript (eg. jquery), although in the last few years the use of Vanilla Javascript (a name given by developers to simple Javascript) is seeing a resurgence.

At first, the browser was the only possible habitat of Javascript, but with the creation of runtime environments for the language (non-browser environment that can interpret Javascript) such as Node.js, Javascript can be now used to write both client and server side software.

With the increasng importance of PWAs and other web based solutions nowdays, which coexist and sometimes even replace pre-existing technologies, Javascript relevance seems to be destined to keep soaring in the coming years.

Q1.2

Choose one of industry tools for “Bazaar Ceramics” (Attached Client Profile) and explain why it is relevant to them.

**Answer**

HTML5 – Together with CSS3, HTML5 is the tool used to structure and style the web pages that will constitute the Bazaar Ceramics website. As it happens in many industries, especially in those segments that are customer oriented, things such as trends and UX are one of the main focus. The way users interact with technology is constantly evolving and it can be easy to be left behind by more attentive competitors, with customers perception of a company largely based on their public appearance.

Most of users interaction with technology nowdays happen on mobile. Just a few years ago, developing a website was done with desktop or laptop machines in mind. Links and menus became the common way to organize a web page, with the content provided in similar ways acoss most of the websites, to give users a familiar experience, thus making a website navigation easy and intuitive. Today, a website built with that approach, would most liley damage the image of the company. It would be perceived as outdated and would affect the company’s credibility.

A well planned and implemented design, well aware of modern trends, has to keep in consideration future evolution and a “mobile first” approach following modern standards is a must.

HTML5 and CSS3 come with features that allow to easily follow this design paradigm. Those information that before required some typing and mouse swiping to be accessed, now need to be be available at thumb reach, from a hand that is also holding a smart phone. This design choices also affect the desktop experience, with a website desktop view resembly more and more closely that of a phone, or tablet.

The development of the Bazaar Ceramics website should follow the same path. The organization of the elements on the screen and their style should be done with in mind the idea that most people will consult the website from their mobile devices, and that the rules of familiarity and ease of use that apply to the mobile world are well established and are not the same that apply, or used to apply to the desktop world.

Q1.3

Develop an action plan based on your chosen tools (Q1.2). The plan needs to list the tasks that need to be implemented. You need to consider: benefits, appropriate technologies and current industry standards.

**Answer**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action Plan** | | | |
| **Goal:** Implement modern “mobile first” design for the development of the Bazaar Ceramics website. | | | |
| **Activities** | **Responsibilities** | **Resources** | **Timeline** |
| Hire development team   * Reasearch development studios * Compare portfolios * Ask quotation * Hire suitable studio | Manager | Manager | 1 week |
| Research possible solutions   * Research competitors * Market research * Identify suitable options | Manager | Manager  Marketing  Development team | 1 week |
| Develop design concept   * Suggest design concepts * Elaborate based on feedback from management * Select suitable design | Dev team  Manager | Dev team  Manager  Marketing | 1 week |
| Develop Design   * Develop prototype * Approve prototype * Develop design | Dev team  Manager | Manager  Marketing  Dev team | 1 week |
| Test the design   * Identify testers * Test design * Collect feedback * Implement changes (if required) * Repeat until approval | Manager  Dev team  Testers | Manager  Dev team  Testers | 1 to 2 weeks |
| Approval | Manager | Manager  Dev team  Test team | 1 day |
| **Evidence of Success:** | * Increased traffic on the website * Increase in the average time spent by users n the website * Increase in sales | | |
| **Evaluation Process:** | Bazaar Ceramics will compare the performance of their current website with thoe of the new solution, in terms of traffic, time spent on the website and sales.  Because the design is just part of the overall website, the effect of its influence will be evaluated also through specific customer questionnaire and feedback. | | |

Q2.1

Briefly describe different testings in website development.

**Answer**

FUNCTIONALITY TESTING – Most website implement some functionalities in one form or the other. Even brochure website, whose purpose is to simply display information to the user, may still have links and menus that lead to other parts of the website or to different websites entirely. More complex website may need to collect and manipulate data from a user, or display personlised content. To ensure that the website operate as intended, each of these parts needs to be tested separately and in cooperation with the others.

Some common tests that should be run on most websites are:

* Link checks: Ensure that there are no broken links in the page and that the links lead to the correct place.
* Form testing: When collecting data from a user there are severl areas of concern that should be considered, with security being the first. Wothouth delving to deep in penetration testing, it’s worth at least mentioning that each field a user can fill, should be sanitised and validated to prevent malicious injections or other sort of manipulations.

On top of security, proper error management is also very important, with the wrong inputs recognized and appropriate message displayed to the users. A useful measure to help preventing wrong input is to provide default values in the fields.

* Cookies testing: Tests how the application behave when cookies are enabled or disabled, check if cookies are encrypted and if they have an expiration date.
* HTML/CSS validation: Ensures that the website is optimizable for CEO
* Database testing: Checks for database connectivity and data handling. Checks that queries are run correctly and that data manipulation donesn’t compromise their integrity.

USABILITY TESTING – Tests how easy it is to navigate a website from the perspective of both new and regular users. The organisation of the elements on the page, the links and the menus should be easy to familiarize with for a new user and common tasks should be quick to complete for recurring ones. The website should strive to keep the number of navigation layers to the bare minimum and any part of the website should be in reach of any other, if appropriate.

User help, in the form of instructions, advises, search bars, or navigation trees, should be always present on each page.

The content itself should be subject to usability testing. Spell check, color scheme, content quality, images rendering and any other element that falls under this category, should work to make the website easy and pleasant to use.

INTERFACE TESTING – The website will need to interface with a web server and probably with a database server and an application server. It’s important to test that these communication work properly, but because downtime of any of those is always possible, error handling shouldn’t be forgotten.

COMPATIBILITY TESTING – There are three main apects that need to tested for compatibility when developing for the web: browser compatibility, OS compatibility and responsiveness.

* Browser comptibility: Any web resource should be accessible by at least all the major browsers. By accessible is meant that the website is rendered porperly and behave consistently across the brosers, with just minor aesthetic variances due to each browser specifics, deemed acceptable.
* OS compatibility – A similar matter applies to the different OS. To ensure the expected behaviour of the website to be consistent, it should be tested across various OS.
* Responsiveness – As stated above, in recent years mobile became the main way to access the web. Website should be always tested to ensure that they work on mobile as well as on desktop. The most recent standard actually subvert this conception, and website are now expected to be developed for mobile specifically, with the desktop version being following.

A fourth aspect to consider is that of printing options, if available. Font spacing and colours should be rendered as expected on paper.

PERFORMANCE TESTING – According to its nature, the traffic that a website can receive can vary in order of magnitudes. From close to none to millions of users each day. Performance testing includes web-load testing, to test how many users the website can handle simultaneously, and stress testing, that puts parts of the system (log ins, sign ups, input fields) under stress to see how the system reacts and how it recovers in cas of failure.

SECURITY TESTING – Any system that handles sensitive information is subject to malicious attacks by jackers and other cyber-crimilas. Even more so when financial transaction take place on the website. Security testing must be prioritised to ensure that these data are transferred securely and that customers identities and financial information are protected at all times.

Following are some ways to integrate security testing during the development of a web application:

* Try to access internal url without previous authentication and authorization.
* Try to change ID parameters in the url after a successful login.
* Enter invalid input in data collecting fields.
* Try to access directories and files not available for download.
* Test the CAPTCHA system
* Test for SSL by trying to switch from https to http and vece versa in the address bar.
* Ensure that relevant event are logged correctly in the related files.

Q2.2

Briefly describe which specific features and functions of industry technologies for developing a good website.

**Answer**

Because HTML5 is continually evolving, there may be some disparity in how different browsers handle those changes. Nowadays most of HTML5 features are generally supported by most browsers, and surely by all the major ones, yet some differences may still occur and a developer needs to keep them in consideration to ensure that a website renders and works properly on different clients.

Testing for Cross-Browser compatibility is the best way to check how a website “feels” on different browsers and to ensure that what works perfectly on one, doesn’t suddenly break on another one.

However Cross-Browser compatibility may not be sufficient. A user may have installed on their device an older version of a browser that passed the test, which may lack support for some of the features implemented in HTML5, resulting in errors that can go from a minor inconvenience in the rendering of the page, to a website crashing.

To overcome this problem, a browser detection feature can be implemented using Javascript. Browser detection allows the program to identify which browser the cient is running and what version of that browser, thus making it possible for the developer to implement alternatives that would be interpreted correctly by each browser version. HTML5 also implement native tags for browser detection.

This approach comes with its own problems. Firstly, the amount of work required on the developer side. To guarantee that everything works correctly in every possible scenario, a developer needs to write a lot of code that pretty much does the same thing. The resulting files would be bloated and readibility would be sacrificed.

Secondly, human error is always possible, especially if testing is done manually. It’s not impossible for a bug to survive its way into production, and even if it would affect the smallest part of users, it would still have a negative impact on a company’s reputation.

At last, even the smallest change would require a lot of rework, making browser detection a last resort method, if for some reason other options are not available.

A more efficient way to solve the problem is represented by feature detection. This solution focus on the part of a program, or a website, that can be problematic.

A feature may require access to some specific objects, methods, properties or behaviour that possibly are not available or accessible by every broser. Instead of writing different options for each possible case, developers can add a guard condition to check if the elements required return a value or not. When the a result other than null is returned, the feature can be implemented and will probably work, otherwise an alternative available to all browser can be put in its place, thus ensuring that the page will render as expected.

Q2.3

Explain which industry standards your chosen tools meet.

**Answer**

HTML5 offers native video support, without relying on different technologies or plugins. In the age of mobile, this is especially important. With web technologies being the easiest and probably most convenient way to achieve cross platform compatibility, a browser based option to implement video rendering, goes a long way to simplify the work of developers.

The canvas element allows for graphics rendering and manipulation on the client side, making diagrams interactive by the user. With the evolution of Javascript and audio support, the canvas element can now also be used to develop complex games that rely entirely on web technologies (eg. <http://www.quakejs.com/> )

The introduction of new semantic tags, also set a new standard for the organization of elements on the page. The behaviour of tags like “header”, or “nav”, or “footer” requires less styling and achieve better results in structuring a page for different screen sizes.

Other powerful features are found when looking in how a user mostly interact with a web page. Input fields come with data validation, data picker are readily available and there are APIs for browser history management, drag and drop options, web storage and geolocation.

On top of the features discussed, two of the most relevant aspects inerent to HTML5 are the fact that it is extensively supported by all the major browsers and its web based nature.

As said before, this is the age of mobile platforms. Most of interactions with the web happens from a smartphone, with the two major OS being Android and iOS. Although there are different options for cross-platform development, at the very least they require to learn a new technology (eg. Flutter), or to implement an already well established technology in a new way (eg. Xamarin). The only common standard that apply to both, as well as to pretty much any other platform out there, is that they require a web browser to access the internet. HTML5, together with Javascript and CSS3, are the default technologies to write client side code for the web and as of today, are the only technologies that truly implement the “write once, run everywhere” paradigm.

Q2.4

How to access and use sources of information relating to your chosen tools.

**Answer**

Web standards are set by the World Wide Web Consortium, or w3c in short. [Their website](https://www.w3.org/Consortium/) offers news, documentation and information relevant to the web and web based technologies.

With their [w3schools](https://www.w3schools.com/) they provide comprehensive learning material to study and experiment with every topic that involves web techologies. Their courses include HTML5, CSS3, Javascript and PHP, but also resources on Ajax, Http and widely used frameworks as Bootstrap 4 or React, are available. Other resources available on w3schools focus on topics that, although still relveant to the web, do not entirely revolve around it, such as Python, SQL and more.

For as obvious as it may sound, it is wirth mentioning that most technologies come with their own documentation, which is sometimes (not always) the best source to learn more about a certain technology.

When talking about sources for software and web development topics, no answer would be complete, nor honest, if it wouldn’t at least mention [stackoverflow](https://stackoverflow.com/). The website is the “go to” place, and often the only place, for any developer trying to understand why something they are doing doesn’t work, or why it does. Users of the website can post a question, or a problem they are facing, and the community try to solve it. Many of the proposed solutions are outdated and some are just plain wrong, but inbetween, most of the time the correct answer can be found.

There are online schools that provide good quality learning material, sometimes for free ([codeacademy](https://www.codecademy.com/), [khanacademy](https://www.khanacademy.org/computing/computer-programming/programming)) or for a fee ([udemy](https://www.udemy.com/)).

There are probaly thousands of websites, blogs and video-tutorials that delve deeper in any web based technology and it would be impossible to include them all, or even just the best ones, so in the next paragraph I’m going to list those that I personally found the most useful, the ones I often return to when I need to improve my knowledge.

* <https://css-tricks.com/> - A website that focuses on CSS3 and its frameworks. Simple and clear articles, with examples and tutorials to follow and always up to date.
* <https://developer.mozilla.org/en-US/docs/Web/JavaScript> - Their tutorials, especially for Javascript are thorough and there are articles aimed to any level, from the beginner amateur to the seasoned developer.
* <https://www.youtube.com/channel/UCFbNIlppjAuEX4znoulh0Cw> - The owner and host of this Youtbe channel specialises in web technologies and offers for free some of the best tutorials and lessons to be found online. It mainly target beginner to intermediate level developers.

A last mention goes to [Github](https://github.com/), the most popular code sharing platform. It’s not necessarily the first place to look for resources or solutions concerning web development matters, but for someone with little to none development experience outside of school or online courses and tutorials, Github is the place to breath the world of development and have a taste of what collaboration with other developers looks like (kind of).

Q3.1

Analyse the performance and usability of your chosen tools.

**Answer**

While the features of HTML5 discussed in the previous answers make it the modern standard for web design and development, there are still some considerations to be made about its performance.

Support is one of the main concern when it come to implementing a technology. HTML5 is supported by virtually any modern browser, but thinking that only the latest version of each browser are used around the world, would be a mistake. For many websites, especially ecommerce ones, the goal is to reach as many people as possible and although there are ways for a developer to achieve this retrocompatibility, it requires the inclusion of libraries, which may end up bloating the code and causing integration issues.

As stated above, HTML5 natively supports video rendering with the “video” tag, but there is no standard video format. There are three main video format currently used by HTML5: Ogg (not supported by Safari), MP4 and WebM. When including a video source in a website, a developer must consider its compatibility with different browsers.

Different formats also mean that the chances to incur in licensed products, which would cause increased costs for both the audio and the video to be included in the website.

With PWA and frameworks that focus on adopting a “mobile first” approach to web development, designing for mobile became increasingly relevant and simple to do, but compared to native development it stills falls behind. Speed and accuracy are still inferior compared to the native counterparts and the rendering of the pages still shows inconsistencies from one browser, or platform, to the next one.

With the canvas element, HTML5 offers game development options to web developers, but because Javascript is the only language that HTML5 supports, and because even with its many poitives, Javascript doesn’t work well as a game development language, these options remain largely unfulfilled.

Nonetheless HTML5 is the modern standard for web design and development, and the only real option for creating modern web applications.

Q3.2

Review this chosen tools see whether it is suitable for “Bazaar Ceramics”.

**Answer**

According to the preliminary need analysis for the Bazaar Ceramics website, cross referenced with the features offered by HTML5, it appears that HTML5 is not only capable of meeting all the requirements of the client, but that it is the most suitable and possibly best technology for the task.

HTML5 is stable and its support is nearly ubiquitous. HTML5 is also constantly evolving, although at a slow pace, but this only concur in reaffirming its stability.

Images, pictures, tables, audio and videos natively available makes it the right choice for an ecommerce, where showcasing products in simple yet creative ways plays a major role.

The “alt” paramenter in the media related tags, make the content accessible by users with disabilities and impairments.

HTML5 allows to easily design a responsive application, allowing to reach for the ever increasing mobile audience, without necessarily sacrificing the desktop and laptop experience.

HTML5 popularity also translates in design choices that feel immediately familiar to the user. In a sector such as online shopping, where customers decide in mere seconds if they are interested or not in staying on your website, the “familiar feel” is vital to the success of the operation. This popularity also means that developers expert in the technology are largely available on the market and can easily pick uo the work started by another developer.

With HTML5, developers can define which files the browser should cache, allowing the browser to load the pages much faster and to render them even when offline.

Another imprtant matter when developing an ecommerce website is that of data persistence. Instead of relying solely on cookies, HTML5 gives access to session storage and local storage, making session management more efficient.

Bazaar Ceramics requirements seem to fit those of any modern ecommerce website. With the information gathered so far, HTML5 seems to be the obvious choice and there are no reasons to look for alternatives.

Q3.3

State any environmental considerations involved with your chosen tools.

**Answer**

The development of a web application involves much more than the purpose of its markup. Legal considerations such as discrimination and personal data handling, technological matters such as the evolution of portable devices and the spreading of smart homes environments, the constant changes in market trends and many other factors, all play a role in the planning and design of a software.

For what concern the front end part of an application, and HTML5 in this specific case, it is worth noting that HML5 does “its part”

Data security for example, involves every apect of software development, from data capture in the front end, to the security of the transfer protocol, to the manipulation of the data in the application program and their storage in the database. In this scenario, HTML5 represents only a small part of the picture, of course.

LEGAL MATTERS: Australian privacy legislation regulate the collection and use of sensitive information online. Without getting into much detail, should suffice to say that these laws are used to allow for meaningful use of the information collected, while at the same time protecting the privacy and the assets of the people those information belong to.

HTML5 implements features to validate input from the user. Although useful only as a precaution (thorough data sanitation and validation should always be implemented in the front end scripts and in the application program as well), it represents a first measure to protect the web application and the data it collects, from malicious attacks. HTML5 allow to specify which kind of data the form expect from a specific field, which means that a “phone” field would accept only numeric values and an “email” field would accept only values that follow a certain pattern (eg. [something@somewhere.com](mailto:something@somewhere.com)). A plus worth mentioning is the “password” field, which automatically masks the characters typed by the user behind large bullets or other shapes.

Another legal concern involves the implementation of the Discrimination Act. If in the past only buildings where expected to provide measures to be accessible by people with handicaps and disabilities, nowadays also web resources must provide a mmean to be used by people with impairments.

HTML5 implements semantic tags, which allow developers to organize their documents in a way that is friendly to screen reader users, by letting them know what they are listening to and making it easier to navigate the document by listening to its descritpion.

Although HTML5 support native styling with the “style” property, it also fully support CSS3. Using CSS3 to style a document helps in keeping the markup cleaner and again, easier to use with a screen reader.

On top of the semantic tags, HTML5 also has a label attribute for buttons and form controls. Proper use of labels would allow developers to better describe what an element is used for, and similarly the “alt” attribute of the media tags can provide a description of a video, or an image that would be otherwise completely missed by visually disabled people.

There are several other features available in HTML5 that supply developers with quick and easy to implement choices to make the web accessible by everyone.

TECHNOLOGICAL MATTERS: There are two saying that immediately come to mind when talking about technology. “Technology evolves fast” and “Computers are used to fix problems that wouldn’t exist without computers”. They both stand true and they both are relevant to the environmental considerations that involve HTML5.

Continuous innovation surely is a good thing, but it brings some very noticeable problems. Every new technological advancement, be it a new framework, or an entirely new technology, will have good chances to face issues integrating with the already existing ones. These, on top of a probably already steep learning curve and the lack of reliable resources aside from the documentation provided (which is not always “enough” in the first stages of a new product life cycle) can make the adoption of these novelties discouraging. Some innovations fade away soon, while others stick around for much longer. On the other hand, HTML5 is solid.

HTML5 evolves, but at a much slower pace. It’s the modern standard for front end web design and development and its implementations outpace the speed at which the language itself is changing.

When releasing the iphone 4, Steve Jobs expressed how one of the big innovations introduced by his new product was to put the web in the pocket of every user. At first, he saw the Apple store as a temporary solution. For him Progressive Web Application, or application used in browser, were the future. He didn’t call them PWAs yet, as the term came later, but the concept was there. And he was right.

With such a stable, widespread and commonly available technology such as HTML5 (and CSS3 and Javascript), directing time and resources in developing for the web is natural. Less time required for development, platform independent languages (with caveats, due to browser compatibilities and interpretations, although minimal), and an immense pool of resources, documentation and hands on experience with the technologies make them a safe bet for any technological endeavour.

Q3.4

Research some feedbacks from existing users.

Proper communication with the stakeholders determine the destiny of a project. Poor communication and poor stakeholders involvement is listed as the number one cause for a project failure in the [Standish Group Chaos Report](https://www.standishgroup.com/news/45).

The first step for accurate and effective communication is to identify who to communicate with. Different persons are involved in a project in different ways and with different roles and will require different information for the project to evolve.

Once that the stakeholders are identified, the most appropriate mean of communication with them must be established. Communicating with a team mate sitting just next to your desk is not the same as communicating with the project owner. Emails, instant messaging app, phone calls and meetings are viable options.

But for communication to be meaningful, it must have an effect. Here is where feedback comes into play.

The user of a system can be anyone who needs to interact with it (developers aside, of course). They can be the admin staff, management or the customers of the company. It is important to interact with all the different groups and figures regularly throughout development.

It is improbable that at the starting of a new project every aspect of it is accounted for. Unforseen events, or change of direction, happen all the time. The words “my idea is simple” pronounced by any project owner, should be dreaded by any developer. The only way to ensure that an idea starts simple and ends simple is to keep it in check during the entire development life cycle, and this can happen only by constant liason with the stakeholders.

It can sound overdramatic, but a slight misunderstanding in a project requirements, together with poor communication, can lead to catastrophic results. For these reason, Agile and all of the other Agile-like methodologies used today in software development, put a lot of emphasis in working closely with the stakeholder and exchanging constant feedback.

When everyone knows where they are going and what to expect, is when projects succeed.

Reference

[Please put down any reference book/link here.]

Q1.1

* Latest trends in web technologies – Bryan Bibat
* HTML5 - <https://developer.mozilla.org/en-US/docs/Web/Guide/HTML/HTML5>
* SaaS - <https://www.bigcommerce.com.au/blog/saas-vs-paas-vs-iaas/>

Q2.1

* Web testing - <http://uniinstitute.com.au/ica50615/13_respak/tocmenu/respak_index.htm>

Q2.3

* QuakeJS - <http://www.quakejs.com/>

Q2.4

* W3C - <https://www.w3.org/Consortium/>
* W3schools - <https://www.w3schools.com/>
* Stackoverflow - <https://stackoverflow.com/>
* Codeacademy - <https://www.codecademy.com/>
* Khanacademy - <https://www.khanacademy.org/>
* Udemy - <https://www.udemy.com/>
* Css-tricks - <https://css-tricks.com/>
* Mozilla Javascript course - <https://developer.mozilla.org/en-US/docs/Web/JavaScript>
* Web Dev Simplified - <https://www.youtube.com/channel/UCFbNIlppjAuEX4znoulh0Cw>
* Github - <https://github.com/>

Q3.1

* Disadvantages of HTML5 - <https://brandongaille.com/19-html5-advantages-and-disadvantages/>
* HTML5 video formats - <https://www.w3schools.com/html/html5_video.asp>

Q3.3

* Discrimation Act - <https://humanrights.gov.au/our-work/disability-rights/world-wide-web-access-disability-discrimination-act-advisory-notes-ver#:~:text=2.2%20Equal%20Access%20is%20Required,it%20can%20reasonably%20be%20provided.&text=The%20DDA%20applies%20to%20services%20whether%20provided%20for%20payment%20or%20not>
* Web accessibility - <https://developer.mozilla.org/en-US/docs/Learn/Accessibility/HTML>

Q3.4

* Chaos report - <https://www.standishgroup.com/news/45>