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Workbook

WA1a

Research Web System Tools to Build a Dynamic Website

ICT50611 Diploma of Website Development

TAFE Queensland Brisbane

|  |  |
| --- | --- |
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**Update your Contents**

Don’t forget to update your Contents before submitting your Workbook. The easiest method to update the Contents is to highlight the Contents > right click > select Update Field > select Update entire table.

# Select Web System Tools

You must provide comprehensive written recommendations for appropriate web system tools to design and build your proposed website. Specifically, you must compare and contrast the following categories of web system tools and make an informed recommendation as to which specific tool (e.g., which eCommerce platform, which website hosting provider, which online payment solution, etc.) from each category is most appropriate to design and build your proposed dynamic website. **Complete the tables below. Add more tables or rows to your tables, if required.**

**\*\*Note that it is your responsibility to refer to the wa1 Assessment Instructions for details of all assessment requirements for this section.**

## Version Control

### Version Control Tool 1

|  |  |
| --- | --- |
| **Tool name** | GIT Hub |
| **URL of official website** | https://github.com/ |
| **Brief description** | Git is the new fast-rising star of version control systems. Initially developed by Linux kernel creator Linus Torvalds, Git has recently taken the Web development community by storm. Git offers a much different type of version control in that it’s a distributed version control system. |
| **List of features** |  |
| **Details of associated cost** | Public use - Free |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Version Control Tool 2

|  |  |
| --- | --- |
| **Tool name** | Mercurial |
| **URL of official website** | https://www.mercurial-scm.org/ |
| **Brief description** | Mercurial is another open-source distributed version control system, like Git. Mercurial was designed for larger projects, most likely outside the scope of designers and independent Web developers. That doesn’t mean that small development teams can’t or shouldn’t use it. Mercurial is extremely fast, and the creators built the software with performance as the most important feature. |
| **List of features** |  |
| **Details of associated cost** | Free |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Version Control Tool 3

|  |  |
| --- | --- |
| **Tool name** | CVS |
| **URL of official website** | http://savannah.nongnu.org/projects/cvs |
| **Brief description** | CVS is a version control system, an important component of Source Configuration Management (SCM). Using it, you can record the history of sources files, and documents. It fills a similar role to the free software RCS, PRCS, and Aegis packages. |
| **List of features** |  |
| **Details of associated cost** |  |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Version Control Tool Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Git Hub |
| **Identified tasks tool should accomplish** | Web based version control tool that is simple yet effective |
| **Expected level of difficulty using tool** |  |
| **Reasons tool is not required (if applicable)** |  |

## Database Management System

### Database Management System Tool 1

|  |  |
| --- | --- |
| **Tool name** | Microsoft SQL |
| **URL of official website** | https://www.microsoft.com/en-au/sql-server/sql-server-2016 |
| **Brief description** | Database and analysis offering for rapidly delivering the next generation of scalable e-commerce & line-of-business solutions. |
| **List of features** | * ACID * Backup * Custom Functions * Import Data * Real Time Access to Database * Referential Integrity * SQL Interpreter * Transactions * Unicode |
| **Details of associated cost** | Prices can vary but for the level we are working at there is a free entry-level database that's ideal for learning, as well as building desktop and small server data-driven applications of up to 10 GB. |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Database Management System Tool 2

|  |  |
| --- | --- |
| **Tool name** | IBM DB2 |
| **URL of official website** | https://www.ibm.com/analytics/us/en/technology/db2/ |
| **Brief description** | DB2 Enterprise for Linux, UNIX, and Windows is the ideal data server for the most demanding workloads. New XML support is designed to help firms minimize the time and effort it takes to persist and use their XML data reducing development costs and improving business agility. |
| **List of features** | * ACID * Backup * Compression of Data * Encryption of Data * High Availability * Highly Scalable * Java Support * Referential Integrity * Transactions * Unicode * XML Format Support |
| **Details of associated cost** |  |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Database Management System Tool 3

|  |  |
| --- | --- |
| **Tool name** | MySQL |
| **URL of official website** | https://www.mysql.com/ |
| **Brief description** | MySQL Enterprise Edition includes the most comprehensive set of advanced features, management tools and technical support to achieve the highest levels of MySQL scalability, security, reliability, and uptime. It reduces the risk, cost, and complexity in developing, deploying, and managing business-critical MySQL applications. |
| **List of features** | * ACID * Backup * Custom Functions * Database Imports * Export Data * Import Data * Integrated Storage Manager * Java Support * Referential Integrity * SQL Interpreter * Transactions * Unicode * Very small and Fast |
| **Details of associated cost** | Free |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Database Management System Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | MySQL |
| **Identified tasks tool should accomplish** | Acts as a reliable DBMS, that is sufficient in completing the tasks we require to do and is also familiar. |
| **Expected level of difficulty using tool** | Medium |
| **Reasons tool is not required (if applicable)** |  |

## Server Side Programming Language

### Server Side Programming Language 1

|  |  |
| --- | --- |
| **Tool name** | PHP |
| **URL of official website** | http://www.php.net |
| **Brief description** | PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. |
| **List of features** | * Easy to learn, especially for developers with C/C++, Java, or Perl experience. * Active user community willing to lend you a hand getting started. * Everything’s built right into the language. * It’s free! * Cross-platform. |
| **Details of associated cost** | Free |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** | * This language was designed to be programmer-friendly, which unfortunately makes it a little less friendly to non-programmers. |

### Server Side Programming Language 2

|  |  |
| --- | --- |
| **Tool name** | Python |
| **URL of official website** | http://www.python.org |
| **Brief description** | An interpreted language, Python has a design philosophy which emphasizes code readability (notably using whitespace indentation to delimit code blocks rather than curly braces or keywords), and a syntax which allows programmers to express concepts in fewer lines of code than possible in languages such as C++ or Java. |
| **List of features** | * Python is processed at runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP * You can actually sit at a Python prompt and interact with the interpreter directly to write your programs. |
| **Details of associated cost** | Free |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Server Side Programming Language Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | PHP |
| **Identified tasks tool should accomplish** | Acts as a competent serverside programming language which is highly regarded |
| **Expected level of difficulty using tool** | Difficult to learn |
| **Reasons tool is not required (if applicable)** |  |

## Domain Name Registration

### Domain Name Registrar 1

|  |  |
| --- | --- |
| **Tool name** | Domain Registration Services (Australia) |
| **URL of official website** | https://www.domainregistration.com.au/ |
| **Brief description** | Domain Names Registrar (Australia) provides fast domain name registration and affordable professional website hosting solutions. Buy with confidence and grow your business without breaking your budget. |
| **List of features** |  |
| **Details of associated cost** | .com.au $127 for 2 years |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Domain Name Registrar 2

|  |  |
| --- | --- |
| **Tool name** | Go Daddy |
| **URL of official website** | https://au.godaddy.com/domains/ |
| **Brief description** | You can’t have a website without a domain name. Like a street address that tells people where you live, a domain helps customers drive directly to your website. We can help you find one you’ll love. – Go Daddy |
| **List of features** |  |
| **Details of associated cost** | .com.au $11.45 per year |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Domain Name Registrar Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Go Daddy |
| **Identified tasks tool should accomplish** | Acquire domain name  Affordable price  Easily acquired |
| **Expected level of difficulty using tool** | Easy |
| **Reasons tool is not required (if applicable)** |  |

## Website Hosting Provider

### Website Hosting Provider Tool 1

|  |  |
| --- | --- |
| **Tool name** | hover |
| **URL of official website** | https://www.hover.com/ |
| **Brief description** | Hover may not have the cheapest registration prices on the market, but it makes up for it with abundant discount codes around the web, stellar customer support and hands-off domain migration. Hover offers a transfer "valet" service that does all of the work for you and makes switching over a painless process. Its control panel and management tools are notable for being clean and easy to use. |
| **List of features** | * Hundreds of extensions * Domain emails * Well regarded customer support |
| **Details of associated cost** | $12.99 for .com, $14.99 renewal |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Website Hosting Provider Tool 2

|  |  |
| --- | --- |
| **Tool name** | dreamhost |
| **URL of official website** | https://www.dreamhost.com/ |
| **Brief description** | Dreamhost was included in our list of best web-hosting services, and it offers free domain name registration with most of its hosting plans. Not only does Dreamhost offer the convenience of having your hosting and registration in one place, it offers speedy customer service, and comprehensive dashboard and management tools. |
| **List of features** | * Domain forwarding |
| **Details of associated cost** | $10.95 for .com, $13.95 renewal |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Website Hosting Provider Tool 3

|  |  |
| --- | --- |
| **Tool name** | GoDaddy |
| **URL of official website** | https://au.godaddy.com/ |
| **Brief description** | Godaddy is one of the largest domain name registrar and Web hosting provider in the world and has more than 12 million customers around the world. They also cater to the Australian market and is the only US provider to compete with local domain providers to give a cheaper price for .com.au domains |
| **List of features** | * Award winning support * World’s leading domain registrar * Free domain with registry |
| **Details of associated cost** | $10.99 for.com.au /year |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Website Hosting Provider Tool Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Go Daddy |
| **Identified tasks tool should accomplish** | * Hosting control centre * Yearly hosting * Reasonable disk space * 1 required website * DNS management |
| **Expected level of difficulty using tool** | Easy |
| **Reasons tool is not required (if applicable)** |  |

## DNS Hosting

### DNS Hosting Tool 1

|  |  |
| --- | --- |
| **Tool name** | Crazy Domains |
| **URL of official website** | https://www.crazydomains.com.au/ |
| **Brief description** | Crazy Domains Free DNS hosting gives you full control over your domain records in a real time facility that provides greater speeds, stability and security to your website. |
| **List of features** | * IPv4 / IPv6 * Anycast Network * Standard DDoS Protection / Advanced * Standard Site Speed / Fastest DNS Records |
| **Details of associated cost** | Free Standard / Premium $19.95 /year |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### DNS Hosting Tool 2

|  |  |
| --- | --- |
| **Tool name** | GoDaddy |
| **URL of official website** | https://au.godaddy.com/ |
| **Brief description** | Manage and protect your DNS with GoDaddy Premium DNS Hosting services. Easy to use advanced DNS management service and DNS Security. |
| **List of features** | * Secure up to 5 domains with DNSSEC * Templates to create, save and reuse zone settings * Secondary DNS * Web forwarding |
| **Details of associated cost** | $3.39 /month |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### DNS Hosting Tool Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Go Daddy |
| **Identified tasks tool should accomplish** | * Security hosting * Avaiablilty improvement * Reliable network * Compatible with prior web hosting with Go Daddy |
| **Expected level of difficulty using tool** | Easy |
| **Reasons tool is not required (if applicable)** |  |

## Server Health Monitoring

### Server Health Monitoring Tool 1

|  |  |
| --- | --- |
| **Tool name** | Happy Apps |
| **URL of official website** | http://www.happyapps.io/ |
| **Brief description** | Happy Apps is a handy system that monitors all your apps across public, private, and hybrid clouds. This monitoring system catches key incidents, without the false positives that create an overload of alerts and notifications, many of which are not essential. |
| **List of features** | * Monitor Status of all your Apps & IT Systems at Once * Reports for analysis * Incident reports and alerts |
| **Details of associated cost** | $9.95 /month Basic |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Server Health Monitoring Tool 2

|  |  |
| --- | --- |
| **Tool name** | Monitis |
| **URL of official website** | http://www.monitor.us/ |
| **Brief description** | All-in-one application monitoring platform. Monitor your websites, servers, applications and more... anytime from anywhere. |
| **List of features** | * Website Monitoring * Server Monitoring * Network Monitoring * Application Monitoring * Cloud Monitoring |
| **Details of associated cost** | Free |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Server Health Monitoring Tool 3

|  |  |
| --- | --- |
| **Tool name** | Nagios |
| **URL of official website** | https://www.nagios.org/ |
| **Brief description** | Nagios is known for being the best server monitoring software on the market. Server monitoring is made easy in Nagios because of the flexibility to monitor your servers with both agent-based and agentless monitoring. With over 5000 different addons available to monitor your servers, the community at the Nagios Exchange have left no stone unturned. |
| **List of features** | * Advanced Graphs & More * Capacity Planning * Powerful Monitoring Engine * Updated Web Interface |
| **Details of associated cost** | 100 Node: $1,995 |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Server Health Monitoring Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Monitos |
| **Identified tasks tool should accomplish** | Monitors server and gives feedback and error reports whilst being the cheapest option |
| **Expected level of difficulty using tool** | Easy |
| **Reasons tool is not required (if applicable)** |  |

## Online Payment Solution

### Online Payment Solution Tool 1

|  |  |
| --- | --- |
| **Tool name** | Paypal |
| **URL of official website** | https://www.paypal.com/ |
| **Brief description** | Through PayPal, you’ll have the ability to place PayPal Checkout buttons on your website. This allows customers access to a PayPal gateway to buy an item from your site. Visitors are directed to a PayPal checkout page where they can use any number of payment methods to pay you. You can also create, send, and receive payments for invoices with this service. |
| **List of features** |  |
| **Details of associated cost** | PayPal charges 2.9% plus 30 cents per transaction. Rates decline with higher sales volume. Rates also go down if you use the PayPal Here credit card reader. |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Online Payment Solution Tool 2

|  |  |
| --- | --- |
| **Tool name** | Square |
| **URL of official website** | https://squareup.com/au |
| **Brief description** | Square offers you a free online store site where you can list and sell your items and services. Items can be embedded onto your own website. These embeds act as the gateway for your customers to complete their transactions. Square also allows you the ability to send and receive payments on invoices. And the company offers a credit card reader for accepting payments in-person from customers. |
| **List of features** |  |
| **Details of associated cost** | You’ll be charged a 2.75% fee on every transaction conducted online using Square or with its card reader. |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Online Payment Solution Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Paypal |
| **Identified tasks tool should accomplish** | A system that allows for easy payments for optional donations |
| **Expected level of difficulty using tool** | Easy |
| **Reasons tool is not required (if applicable)** |  |

## SSL Certificate Authority Tools

### SSL Certificate Authority Tool 1

|  |  |
| --- | --- |
| **Tool name** | Go Daddy |
| **URL of official website** | https://au.godaddy.com/web-security/ssl-certificate |
| **Brief description** | SSL stands for Secure Socket Layer. It might sound complex, but it's really not. SSL Certificates validate your website's identity, and encrypt the information visitors send to, or receive from, your site. This keeps thieves from spying on any exchange between you and your shoppers.  When you have an SSL Certificate protecting your website, your customers can rest assured that the information they enter on any secured page is private and can't be viewed by cyber crooks. GoDaddy makes it easy to install your certificate and secure your server |
| **List of features** | * Proves domain ownership * Boosts Google ® ranking * Strongest SHA-2 & 2048-bit encryption * Padlock in address bar * Protects 1 website * Security trust seal |
| **Details of associated cost** | $99.99/year |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### SSL Certificate Authority Tool 2

|  |  |
| --- | --- |
| **Tool name** | Comodo |
| **URL of official website** | https://ssl.comodo.com/ |
| **Brief description** | A Comodo SSL Certificate is the quickest and most cost-effective way for an online business to protect customer transactions. Apart from their low cost, each certificate also comes with a great value-add package, which makes them perfect for small to medium size businesses. |
| **List of features** | * Green address bar provides immediate trust and helps customer conversion * 2048-bit, highest assurance SSL Certificate, with 99.9% Browser Recognition * Priority phone support * Free Comodo Trust Logo for unlimited server licenses |
| **Details of associated cost** | $249.99/year |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### SSL Certificate Authority Tool Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ☐ Yes ◼ No |
| **Recommended tool name** |  |
| **Identified tasks tool should accomplish** |  |
| **Expected level of difficulty using tool** |  |
| **Reasons tool is not required (if applicable)** | My website does not require payments or request any personal information  As this site will be used as a localised social application there will be no need for the ssl certification |

## Website Analytics Tools

### Website Analytics Tool 1

|  |  |
| --- | --- |
| **Tool name** | Google analytics |
| **URL of official website** | https://www.google.com/analytics/ |
| **Brief description** | Google Analytics gives you the digital analytics tools you need to analyze data from all touchpoints in one place, for a deeper understanding of the customer experience. You can then share the insights that matter with your whole organization. |
| **List of features** | * Data Collection & Management * Data Analysis, Visualization, and Reporting * Data Activation |
| **Details of associated cost** | Free |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Website Analytics Tool 2

|  |  |
| --- | --- |
| **Tool name** | Crazy Egg |
| **URL of official website** | https://www.crazyegg.com/ |
| **Brief description** | Is it easy to set-up?  Heck yes, it is! In fact, it takes just a couple minutes, and can even be done with zero technical knowhow.  Is it relatively inexpensive?  It’s that, too! When compared to eye tracking or user testing efforts that cost thousands more, it’s a complete no-brainer. |
| **List of features** | * Get priceless insights for high-ROI changes * Use your web budget way more effectively * Make a great case for prioritizing your redesign * 10,000 visits per month * 10 active pages * Daily reports |
| **Details of associated cost** | $9 /month |
| **Industry standards (if applicable)** |  |
| **System Requirements** |  |
| **Advantages v Disadvantages** |  |

### Website Analytics Tool Recommendation

|  |  |
| --- | --- |
| **Tool required for this project?** | ◼ Yes ☐ No |
| **Recommended tool name** | Google Analytics |
| **Identified tasks tool should accomplish** | Google Analytics provides a free, convenient data analysis server that is reliable and highly regarded in the community |
| **Expected level of difficulty using tool** | Easy |
| **Reasons tool is not required (if applicable)** |  |