

<Project 3: The Gaming Room , Draw it or Lose it Application>

# **CS 230 Project Software Design Template**

Version 1.0

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## [Document Revision History](#_grjogdjh5fi8)

| Version | Date | Author | Comments |
| --- | --- | --- | --- |
| 1.0 | <12/11/2022> | <Tran Duong Tuyet Tran> | Brief description of changes in this revision:  The revision are about reviewing and creating more informations on the Gamer’ Room operating platform and adding more details for hosting the webstite for the game Draw it or Lose. The new fixing is writing more about the security of Window such as putting more research about the Window’s firewall for hosting the website, how the Window firewall protect the computer, how the Window’s firewall help prevent cyber attack and virus from entering the computer. Another change is having more researching on memory management such as the identifying the needs of database to save information, data when creating game. The last revision is indentifying more on security, operating systems architectures and storage management. |

**Instructions**

Fill in all bracketed information on page one (the cover page), in the Document Revision History table, and below each header. Under each header, remove the bracketed prompt and write your own paragraph response covering the indicated information.

## [Evaluation](#_2o15spng8stw)

Using your experience to evaluate the characteristics, advantages, and weaknesses of each operating platform (Linux, Mac, and Windows) as well as mobile devices, consider the requirements outlined below and articulate your findings for each. As you complete the table, keep in mind your client’s requirements and look at the situation holistically, as it all has to work together.

In each cell, remove the bracketed prompt and write your own paragraph response covering the indicated information.

| **Development Requirements** | | | **Mac** | **Linux** | | **Windows** | | **Mobile Devices** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Server Side** | Characteristic: The terminal in the Mac Operating system is easy for the users to use. There will be the direction and information that guilde people to use, make changes, and make correction to run the code. People can easily enter the code and command in the mac operation system.  It is easy to start and use Mac for web hosting. Mac is secured and stability when the users host the website, because it can allow lots of people to acess the website with security and the users can be stayed in stable connection.  Advantages:  Mac is flexible and it provides many offers, features, upgrades for the users. There will be a large amount of data, storage that the users can use when choosing Mac as a website hosting service.  Disadvatages:  Mac is not popular in the global website hosting services market. | | | | Characteristic:  The Linux operating system is low cost than Mac. And Linux has high speed performance, the user can easily use the control panel, command in Linux.  Linux has unlimited spaces which can contain lots of graphics, hundred of pages in the website.  Advantages:  Linux is reliability. which many users trust and use Linux. Linux operating system is safety and it has many features provide to the users.  Disadvantages:  Linux has no upgrades when the website is developed and there will not have lots of appilcations to support the Linux website server. | | Characteristic:  It will be easier for the users to set up applications or software provided by Microsoft than with Linux hosting.  Window operating system is popular in website hosting services market.  Advantages:  The Control Panel in Window is simple and easy to use in the first time. Window hosting has unlimited storage, the website run by Window will have good connection.  Disadvantages:  Security in Window is not as high as Linux. Window has poor performance. And Window will take a long time to be able to fix the problem when it occurs. Window operating system has poor technician support and bad customer service. | | Characteristic:  Popular in the website hosting services market. It has higher reach and interaction from the customer than Mac, Window and Linux.  Advantages:  Mobile website has cheaper cost than other operating system. It is easy to use and has large data, storage.  Distadvantages:  Mobile website has security issue, attack, damages from viruses.  The mobile server can only by use or host in some smart phone. | |
| **Client Side** | | It is depending on the complexity and the requirements of the website. It will range form $44 to $700 per month. | | It is depending on the complexity and the requirements of the website. Linux will range form $39 to $500 per month. | | Window has reasonable price for the customers. It is suitable for many clients such as hosting a personal blog, business website. It is still depending on the complexity and the requirements of the website. Window cost will range form $44 to $500 per month and similar to Mac. | | It is depending on the complexity and the requirements of the website. Mobile host website will range form $39 to $500 per month and the price for building a website will be cheaper. | |
| **Development Tools** | | | The users can use notepad to run code and host a website. macOS also use PASCAL, C, C++, Java, HTML, Python and other all languages to host a website. | Linux use IDE such as Visual Studio, Pycharm, Eclipse, NetBean to edit code. Linux can also use PASCAL, C, C++, Java, HTML, Python and other all languages to host a website. | | Window use IDE such as Visual Studio, Pycharm, Eclipse, NetBean to edit code.Window use PASCAL, C, C++, Java, HTML, Python and other all languages to host a website. | | People can create application to run code on the mobile or use the Android application to run code. Mobile operating system use PASCAL, C, C++, Java, HTML, Python and other all languages to host a website. | |

## Recommendations

Analyze the characteristics of and techniques specific to various systems architectures and make a recommendation to The Gaming Room. Specifically, address the following:

**1.Operating Platform**:

I will create the application by Windows. Windows have many features. It is easy to manage the website server, applications in Window. The Windows system is one of the systems that is equipped with a variety of applications. Windows operating platform is easy to use to create the Draw it or Lose it game. The operating system is easier to handle than the operating system UNIX and MAC. Window provides safety, security and many features such as firewalls, the users can search and share the files easily. Window is cheaper than other operating system for hosting a website. There are many Integrated development environment is available in Window for the users to edit the code. The game developers can find the cheap laptop to use Windows operating system.

**2.Operating Systems Architectures**:

Window has a good Graphical User Interface (GUI). The users can esily to use and adjust the GUI, there are many great functions in Window Graphical User Interface. There are menu, graphics, and list of commands in Window’s GUI that supports the users to host a website. The users can use icons, and menus, commands to perform the tasks that needed to host the website, they can also use the command opening, deleting, and moving files. Window has a good Graphical User Interface, It is a way of communicating with the computers with users. Window also has many command lines and many useful features such as system resources for users. Window Graphic User Interface will improve the hosting website performance. The operating system can give the higher resolution graphic. In Window’s GUI, the users’s images can have higher resolution, the sound effect in the website will be smoothly, the messaging, webservice required for the website and the game will be more adapted. In addition to the Window architectures’ features, Windows operating system allows the users to open multiple windows, multiple file, multiple folders and multiple applications. The Window’s architectures and its interface is easy to handle, the users can complete and perform the tasks in a few clicks. While other operating systems such as Linux and Mac are requiring to write multiple commands to perform the tasks.

**3.Storage Management:**

Window also has a large amount of storage which allow the users to manage files, pictures, datas and audios. The users can easily to select and find the files, options, features in Window operating system. Window has a good data storage. It is easily downloading, finding and reinstalling the file in Window operating system. Any personal data such as pictures, [home](https://thanhnien.vn/doi-song/gia-dinh/) videos, application or other documents on Window operating system can be find easily. The solid state drive (SSD) can help to keep the data safe and improve the performance of the system. The SSD of Window operating system can give the computer higher speed. The SSD are requiring a short time to begin or start the application or software in Window. The hard drive SSD help to upload and download the data and file faster.

**4.Memory Management**:

Window has a large memory management, the Window memory management helps to maintain the project and users’ data. The memory management contain a large amount of space and it can save large project. The advantage of Window memory management is it can allow to load more than one work. Widow has a database which can store data fields such as account, password, information, audio, video, images for the website. It means the users are in a good and safe environment outside the Integrated Developement Invironment, the users can acess and save the data of the game while offline and they can write the code in their Visual Studio code, Eclipse and save the data in the database, memory management in Window. The memory management in Window help to load games, applications, picutures, file fast. While the data stored in other operating system can be lost after one to two years; but in Window, the data can be stored more than five years. Window’s memory needs ten to twelve second to start the computer and other applications. It also requires short time to open the files, and start other softwares.

**5.Distributed Systems and Networks**:

Window has a good and stable distributed system. Window can connect with most of the devices. Window is strong in exchanging information and data between computers. Window can ensure the main computer network can connect to other computers stablitily to host the website. The operating system also has the ability to handle errors when something is wrong such as outage. Window operating system can make sure all the functions and data are distributed across all computers. When it is an outage, the distributed system need to be strong enough to prevent problems. The users can distribute data into a cloud or the OSF (Open Software Foundation). OSF is a distributed computing environment. OSF is a device which are used to transfer and receive data from different users and from different computers. OSF can help to distribute the game application or the software among many computers. OSF can process and run different programs, files in the game application on two or more computers. From the Open Software Foundation’s features, the computers of the users can transfer and receive data, those computer can communicate with each other over the network to perform the complete task.

**6.Security**:

Window is known for its security, firewall and its anti-virus software. Window has developed and make updates to protect the users. Window is famous for its firewall. Window firewall can help to prevent cyber attack and virus from entering the computer and it can limit the data and users’ information leak out from the computer. Window operating system is helping to protect the users, files from viruses, malicious code, spyware, etc. It also helps to avoid losing data. There are many security software to install to protect the computers with Window operating system such as Bitdefender and Dr.Web Antivirus.Window also has build in their antivirus software, which means the users do not need to waste time to select and install other security software for their computers. Window also developed the software named Windows Hello. Windows Hello is allowing the users to sign in their computer or to Window with many security options. These options are face recognization, fingerprint, PIN, security key, password and also photo security. This method is very powerful, useful and helpful for the account protection from the users.