



PROGRESS OUTCOME 3

Reflecting on a game design

Annotation

Within the context of game design, Luka is able to show his understanding and application of:

- the role of operating systems in managing personal computer hardware, security and application software
- file management conventions
- a range of storage devices
- selecting software and file types for a particular purpose.

Background

The students have learnt about the key features of operating systems, file management conventions and the importance of operating systems in managing their digital devices and applications. They have developed a class set of conventions for file and folder management that have been applied in all their learning contexts.

The students have recently completed a unit of work on game design that included developing a game idea, images and the actual game.

Task

The students are given the following task sheet that requires them to reflect on how they used their knowledge of operating systems, file management, and file types in their recently completed game project.

The task provides the students with an opportunity to follow a particular text structure to clearly communicate their knowledge and understanding.

Operating Systems and File Management in Game Design Assessment Report

Create a short report to show your knowledge of operating systems, file management and file types by showing their importance in your game design project. Your report should be well-organised, with appropriately styled headings, fonts and headers/footers. It should include brief written descriptions and screen captures of your use of OS key features, file management and file types when creating your game.

Operating Systems

- Describe (and show screen captures of) the key features of operating systems that you accessed to complete your game design outcome

File Management

- Describe how you structured and named your files and folders, with reference to file-naming conventions that are important
- Explain the purpose for your file and folder management system and use of particular storage devices

File Types

- Give an example of and explain why you used certain file types when developing one part of your computer game (for example, the sprites or logo)
- Explain why you saved your files in a particular format, with the reasons why the file type suited the purpose of the outcome

Student response

Luka's response to the task sheet is shown below.

OPERATING SYSTEMS (OS) and File Management For Game Design

OS with Game Design

The OS is what controls and manages all of your device's applications, software and hardware. Games are made to run on a specific OS. For example, they might run on IOS, Android, Xbox or PlayStation. Every application and every game we use is coded to work with a specific operating system. If I am going to be a game designer in the future, then I will need to know which OS my game is targeted for. The OS is what knows about the particular hardware that the game is being run on and manages that. For example, if there is a special controller, or if there is a touch or swipe, or if there is a keyboard to control the game.

When I was designing my game, I used the OS to:

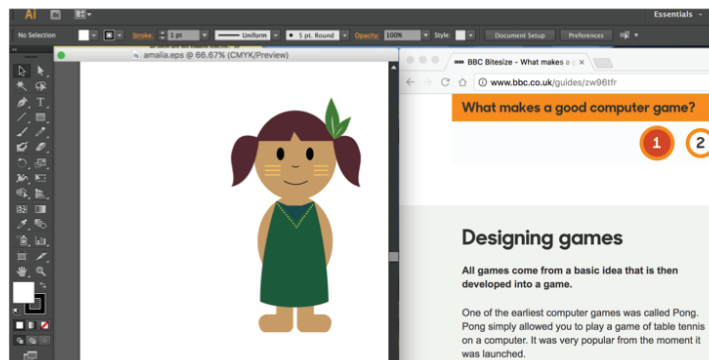
- help me launch my design and programming software
- switch back and forth between apps (multi-task)
- print off my work
- log on to my computer
- manage my files
- share my work with my teacher and friends.



The OS uses a **GUI (Graphical User Interface)**. This focuses on making it easier for the user to perform tasks (e.g. opening up an application) without

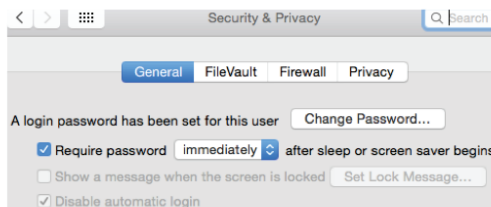
having the need to memorize an interminable amount of commands by simply clicking on icons and buttons. I can use the dock to launch my programming software (GameMaker: Studio) instead of memorizing the commands to launch it.

My OS (OS) can **multitask** between applications and desktops, which means that multiple applications and desktops can be open and available at the same time. It means you don't have to close an app to open another. I can use the Google Chrome browser and my design software at the same time and easily swipe back and forth.



OPERATING SYSTEMS (OS) and File Management For Game Design

When I want to print my designs for my game, I use the OS because it **manages printing and all of the computer's hardware** to devices such as: screen, mouse, keyboard...etc. This means that I am able to print things (e.g. documents, pdfs, pngs ...etc.) straight from my computer.



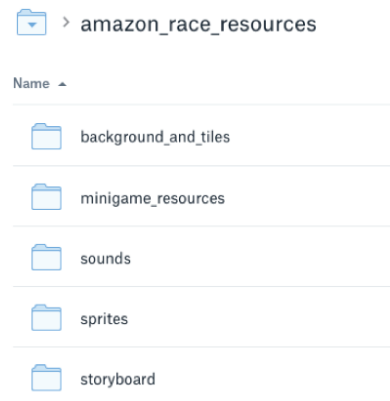
The OS is what manages the **security of my computer** (logons, installation of applications, airdrop file transfer, security through Bluetooth). This means that before something, such as a file, is installed, downloaded or transferred it

asks for your personal password or asks you to accept. When I airdrop files to my partner that I am designing my game with, the OS asks you to “accept” files so that random hackers can’t send you files on airdrop.

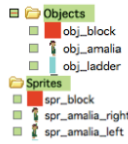
FILE MANAGEMENT with Game Design

Another key feature of the OS is that it allows you to **manage files and folders**. This means that you can: name, rename, lock, colour, code, tag, paste, copy or delete any files and folders. The OS can help organize files by changing how we view the folders (i.e. showing items as icons, in a list or with Cover Flow). The OS can also help arrange files by date, name, kind, application...etc.

I organised my work in folders on DropBox so I could share my work with my teacher and partner easily. Also, DropBox is in the cloud, so it backs up my work automatically and it is safer than only having one copy on my laptop, especially for an important project.



OPERATING SYSTEMS (OS) and File Management For Game Design



When naming my folders and files I don't name them 'untitled' or 'untitled1.doc' as then they would be hard to find, and I would have to open and check everything to find what it is I want; instead I named them strategically. For example, for my game design when naming my sprites, I would put 'spr' at the start and 'obj' for my objects. This way it made it less demanding to identify what type of file something is and divide it into categories.

I also don't use any caps or gaps to help get me into the habit of having good naming conventions. It is especially important to get into the habit of these good naming conventions for a subject such as Digital Technology itself. This is because gaps can break computer programs and uppercase letters could be read and interpreted differently to lowercase letters in other computer programs and/or web pages. Therefore, for when programming my game in GameMaker: Studio for my game design project, I did not use any gaps or caps in the names of my objects, sprites, tiles, sounds and backgrounds.

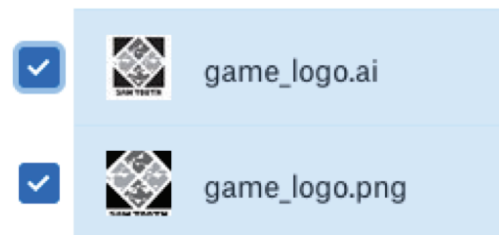
FILE TYPES

Another thing related to file management is knowing about file types. The OS recognises a lot of different file types and will automatically start an application when the file is clicked. For example, when I double click a .docx file, it opens in Microsoft Word.

When creating my sprites and resources for my game, I made them in Adobe Illustrator and therefore saved them as .ai files. This meant that I could always go back to my creations and change/edit or add features to them in Adobe Illustrator whenever I wanted.

After creating my sprites for my game in Adobe Illustrator I would save them as a .png as that file type format supported transparency, which was desirable, as I would not want a block of white around one of my objects during my game.

The .jpeg file format did not support transparency and is more suited for photographs. Therefore, I did not use this file type to create my sprites, as it would mean that there would be a block of white around the objects of my game.



Downloaded from <http://technology.tki.org.nz>

IOS is a trademark or registered trademark of Cisco in the United States and other countries and is used under licence.

OS X and Cover Flow are trademarks of Apple Inc., registered in the United States and other countries.

Google Chrome™ is a registered trademark of Google Inc., used with permission.

Adobe Illustrator® is a registered trademark of Adobe Systems Incorporated in the United States and/or other countries.

PlayStation is a registered trademark of Sony Interactive Entertainment Europe Limited.

Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc.

Android is an open-source operating system developed by Google.

Xbox is a registered trademark of Microsoft Corporation. Microsoft Word is part of the Windows Office suite. This publication is not affiliated with, or authorised, sponsored or approved by Microsoft Corporation.

Dropbox is a trademark owned and copyrighted by Dropbox, Inc.

GameMaker: Studio is a product created by Yoyo Games.

Copyright © Ministry of Education 2017, except for student work copyright © student

The programs and resources used in this exemplar are not officially endorsed by the Ministry of Education.

ISBN: 978-1-77669-219-4

