

RESEARCH JOURNAL — LEGACY GAME SYSTEMS

Version 1.0
BSc Computing for Games
COMP310

Ed Powley

Introduction

In this assignment, you will collaborate to create a wiki focussing on 6502 assembly programming and homebrew NES game development.

There is an active hobbyist community around NES game development on the internet. There are many sources of information available, from blogs and forum posts to online tutorials to technical manuals. However like all information on the internet, it varies in quality and is sometimes disorganised. In this assignment you will collaborate to bring together this information into a single wiki, which should serve as a reference for your constrained development task.

This assignment is formed of several parts:

- (A) **Write** a draft outline in the wiki, that will:
 - (i) **Identify** the key topics to be covered by the wiki
 - (ii) **Structure** these topics in a sensible way
- (B) **Populate** the wiki with content that will:
 - (i) **Explain** key concepts around 6502 and NES development
 - (ii) **Present** useful information for reference purposes
- (C) **Discuss** your contribution to the wiki with your tutor in the viva session in class.

Assignment Setup

This assignment is a **wiki task**. Find the wiki at the following URL:

<https://github.com/Falmouth-Games-Academy/comp310-wiki/wiki>

Edit the wiki directly. Note that you are **not** required to fork or commit to the GitHub repository for this assignment.

Part A

Part A consists of a **single formative submission**. This work is **collaborative**.

To complete Part A, as a class, begin populating the wiki with an outline of the topics to be covered. Discuss and iterate upon this as a class. It is expected that the edit log for the wiki will show that everyone has contributed to this process.

You will receive **immediate informal feedback** in class in week 4.

Part B

Part B consists of a **single summative submission**. This work is **collaborative**.

To complete Part B, populate the wiki with content. Again, this is expected to

"To me programming is more than an important practical art. It is also a gigantic undertaking in the foundations of knowledge."

— Grace Hopper

"Be curious. Read widely. Try new things. I think a lot of what people call intelligence boils down to curiosity."

— Aaron Swartz



The MOS Technology 6502 microprocessor was first produced in 1975. It powered many influential computers and games consoles throughout the 1970s and 1980s, including the Atari 2600, Apple II, Commodore 64, and Nintendo Entertainment System.

be an iterative process to which everybody contributes.

Please ensure that all changes have been made to the wiki by the deadline.

To submit, clone the wiki to your local machine using Git. Compress the wiki as a .zip file and upload it to the submission area on LearningSpace. Note that although this is a collaborative assignment, **everyone must** submit individually via LearningSpace.

You will receive **formal feedback** three weeks after the deadline.

Part C

Part C consists of a **single formative submission**. This work is **collaborative**.

To complete Part C, attend the scheduled viva session. Be prepared to identify and discuss your contributions to the wiki.

You will receive **immediate informal feedback**.

Additional Guidance

Your research journal is intended to support your work on your portfolio task, therefore this should inform your choice of topics to cover. You will inevitably carry out research whilst working on the portfolio task; use the wiki to capture the information you find.

You will need to use a variety of sources for this research task. By all means seek out peer-reviewed scholarly sources reporting primary research, but these are unlikely to contain the level of technical detail required for this task. Whatever sources you use, you should be able to justify them as appropriate and reliable.

A common pitfall is to focus too much on summarising the content of the sources you have read. For higher marks you need to demonstrate **insight** into what you have read: forming inferences and analyses beyond what is written in the original source. Some questions you might ask yourself are: Why did the author choose a particular approach? Is there anything counterintuitive or surprising? Do you disagree with any of the assumptions or claims? Does the source suggest further questions?

A related pitfall is to structure the wiki as a sequence of disconnected entries. Instead aim to **synthesise** multiple sources into a cohesive whole, drawing together information from different sources. Forming a holistic picture of a field is much more valuable than simply understanding individual works.

The wiki is primarily intended to become a useful shared resource for the cohort. As such, students are expected to direct themselves and their peers in populating, structuring and editing the wiki. Note that a wiki is not a piece of academic writing and thus will tend to have a less formal tone than you should be aiming for in other pieces of written work. Edits may be required to ensure a consistent tone for the wiki.

The tutor *will* check the edit logs of the wiki when assessing the criteria listed below. This is not only to assess the quantity of contributions made, but also their nature. The ideal situation is that every page will have contributions from several authors, as opposed to pages being primarily authored by a single person with little input from others. Reading and improving the work of others is just as important as generating new content.

FAQ

- **What is the deadline for this assignment?**

Falmouth University policy states that deadlines must only be specified on the MyFalmouth system.

- **What should I do to seek help?**

You can email your tutor for informal clarifications. For informal feedback, make a pull request on GitHub.

- **Is this a mistake?**

If you have discovered an issue with the brief itself, the source files are available at:

<https://github.com/Falmouth-Games-Academy/bsc-assignment-briefs>.

Please make a pull request and comment accordingly.

Marking Rubric

Criteria marked with a ‡ are shared by the group. All other criteria are individual.

| Criterion | Weight | Refer for Resubmission | Novice Competency | Novice Proficiency | Professional Competency | Professional Proficiency | Expert Competency |
|---|--------|--|--|--|---|---|---|
| Basic Competency Threshold | 40% | At least one part is missing or is unsatisfactory. | Submission of all parts is timely. The student participated in the viva, with enough work available to hold a meaningful discussion. Sources have been cited in an appropriate manner, without any obvious errors. There are no breaches of academic integrity. | | | | |
| Structure | 5% ‡ | There is little structure to the wiki. | There is some structure to the wiki. | The wiki is structured somewhat sensibly. | The wiki is structured somewhat effectively. | The wiki is structured effectively. | The wiki is structured highly effectively. |
| Coverage | 10% ‡ | The wiki gives a superficial coverage of the topic. There is much superfluous material. | The wiki gives an incomplete coverage of the topic. There is some superfluous material. | The wiki gives an adequate coverage of the topic. There is some superfluous material. | The wiki gives a somewhat comprehensive coverage of the topic. There is little superfluous material. | The wiki gives a comprehensive coverage of the topic. There is very little superfluous material. | The wiki gives an extremely comprehensive coverage of the topic. There is no superfluous material. |
| Specificity, verifiability & accuracy of claims | 10% | No citations to evidence to claims. Substantial errors and/or misinterpretations. | Few claims have a clear source of evidence. Significant errors and/or misinterpretations. | Some claims have a clear source of evidence. Many errors and/or misinterpretations. | Many claims have a clear source of evidence. Some errors and/or misinterpretations. | Most claims have a clear source of evidence. Few errors and/or misinterpretations. | All claims have a clear source of evidence. Almost no errors and/or misinterpretations. |
| Depth of insight | 10% | Little insight is demonstrated. Material is summarised in the student's own words. | Some insight is demonstrated. Attempts are made at discussion beyond summary. | Much insight is demonstrated. Discussion is inferential in nature. | Considerable insight is demonstrated. Discussion is analytical in nature. | Significant insight is demonstrated. Discussion is analytical and evaluative in nature. | Extensive insight is demonstrated. Discussion is highly analytical and evaluative in nature. |
| Synthesis | 10% | No connections are made between different sources. | Basic connections are made between different sources. | Reasonable connections are made between different sources. Connections go beyond mere description. | Strong connections are made between different sources. Connections are analytical in nature. | Sources are synthesised into a coherent narrative. Connections are analytical and evaluative in nature. | Sources are synthesised into a highly coherent narrative. Connections are analytical and evaluative in nature. |
| Community engagement | 10% | No contribution has been made to the wiki. | A few contributions have been made to the wiki. The student's contributions are isolated, with little to no engagement in community discourse. | Some contributions have been made to the wiki. The student's contributions are somewhat integrated with the contributions of others. The student has made some attempt to engage in community discourse. | Many contributions have been made to the wiki. The student's contributions are reasonably integrated with the contributions of others. The student has actively engaged in the community discourse. | A significant number of contributions have been made to the wiki. The student's contributions are well integrated with the contributions of others. The student has participated in steering the community discourse. | An extensive number of contributions have been made to the wiki. The student's contributions are tightly integrated with the contributions of others. The student has played a key role in driving the community discourse. |
| Spelling & grammar | 5% | Substantial spelling and/or grammatical errors. | Many spelling and/or grammatical errors. | Some spelling and/or grammatical errors. | Few spelling and/or grammatical errors. | Almost no spelling and/or grammatical errors. | No spelling or grammatical errors. |