A10

Lab Report (Results and Discussion)

In this assignment, you will write the Background, Experimental Setup, Results, Discussion and References sections of a technical report on the Chaotic Oscillator part of the X3 laboratory you undertook earlier this semester.

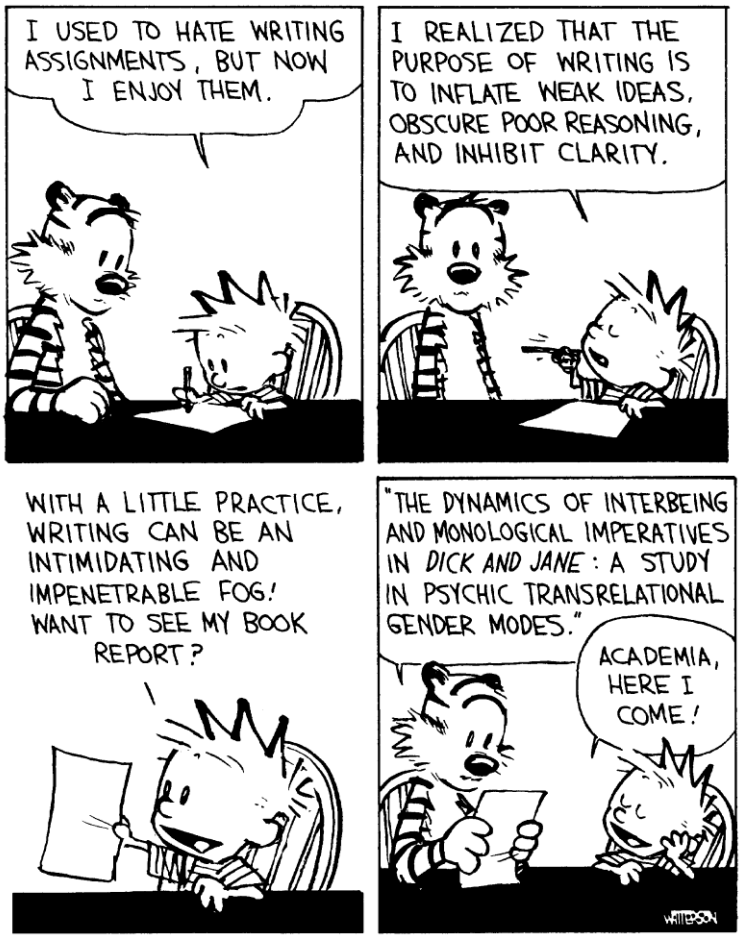

Image: © Bill Watterson

Schedule

Preparation time : 5 hours

Assessment time : 1-2 hours (during your timetabled weekly tutorial session)

Items provided

Tools : n/a

Components : n/a

Equipment : n/a

Software : n/a

Items to bring

n/a

This is an individual assignment, and you should not do it with your lab partner or colleagues. This document outlines the details of the assignment.

Academic Integrity – *This assignment is an individual exercise, and you should prepare for it and write it on your own. You may want to use sources from the internet or books to help complete the assignment. Ensure that you cite such sources appropriately.*

Revision History

November 15, 2016	Geoff Merrett (gvm)	Updated for 2016/17 (AI update reinstated)
November 17, 2015	Geoff Merrett (gvm)	Updated for 2015/16 (Removed AI update)
November 13, 2014	Geoff Merrett (gvm)	Updated for 2014/15 (AI revision)
November 6, 2012	Nicolas Green (ng2)	New assignment for 2012/13

1 Aims, Learning Outcomes and Outline

The aims of this assignment are:

- To give you experience of writing up your Results in a clear and concise manner.
- To give you experience of writing analytical statements with justified conclusions.
- To give you an opportunity to write a technical document which complies with the university's regulations on academic integrity and plagiarism.
- To give you experience of critically reviewing and marking your own work.

Having successfully completed this assignment, you will be able to:

- Write concise and effective Results and Discussion sections of a report.
- Appreciate the purpose and meaning of a Marking Scheme.

In this assignment, you will write a 4-page technical report on the Chaotic Oscillator part of the X3 laboratory you undertook earlier this semester. Your report must be submitted before the *submission deadline*; standard University late penalties will apply for any submissions after this. After submitting your report, you will discuss the Results and Discussion sections in a tutorial session with your personal tutor and tutor group. You will then self-assess your own report, using the marking scheme provided in this document. Your reports will also be checked for plagiarism, and you will also receive feedback on this from your personal tutor.

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2 Preparation

To prepare for this assignment you must have attended and carried out lab X3 and have watched the Technical Writing online lectures (L12 and L13). Pay particular attention to and review the videos on the Results and Discussion sections. As mentioned at the start of term, in order to receive a mark for this assignment you must have also passed (scored 100%) on the University's Academic Integrity test (https://www.efolio.soton.ac.uk/blog/academic-integrity/take-the-test/).

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3 The Assignment

As written assignments are an essential part of professional and student life, the feedback you gain from this assignment will be invaluable in developing this aspect of your skill set. The purpose of this assignment is not only to engage with the process of taking experimental and other forms of data and developing it for presentation in a written form, but also to engage with the marking process so as to better understand what is being looked for in this type of presentation.

For this assignment, you will produce a four page written document about the Chaotic Oscillator that you investigated in lab X3. Your report should consist of the following sections:

Background/theory section (one-side of A4):
This section should provide information on the background to your work and any related work (for example chaos, bifurcation, the Feigenbaum Constant etc). Where appropriate, this should be supported by citing a range of relevant literature (e.g. lab notes, books, conference articles, journal articles, websites etc).

Experimental method section (half-side of A4):
This section should explain the design and setup of your experiment

Results section (one-side of A4):
This should be a clearly written and structured passage of text containing a description of your data obtained from the lab session. It should also include figures or graphs showing that data in an appropriate format, with clearly explanatory figure captions. Figure captions, where possible, should make the figure self-contained in terms of understanding the content.

Discussion section (one-side of A4):
This should contain a written statement of your analysis of your data according to the methods outlined in the laboratory, your conclusions based on that analysis, with the *evidence* to support those conclusions clearly shown. Again, this might contain tables or figures showing the results of your analysis, presented in such a way as to support your arguments and to highlight the conclusions that you are attempting to draw.

References section (half-side of A4):
List the bibliographic information for the sources cited in your report. You should use a standard referencing technique for this, for example IEEE referencing[1].

You should also inspect the Marking Scheme for more specific information on the requirements for content and aspects of writing for this assignment.

Note, you are submitting an incomplete report: it should **NOT** include an abstract, introduction or conclusions section! However, please do include your name, email address and tutor's name on the first page.

The page limit for each section specified above (totalling four sides of A4) must be adhered to, and includes any tables or figures. Any text exceeding this limit will not be assessed. The body of your report should be in 10pt Times or Times New Roman.

When you have completed your technical report, you should submit it electronically as a Portable Document Format (.pdf) file via the handin system (and prior to the *submission deadline*).

3.1 Marking with your tutor

Following the submission of this assignment, you will self-assess the Results and Analysis sections in a tutorial session with your personal tutor, using the marking scheme and form included in this document. Your tutor will be able to discuss the marking scheme with you during this session and you will be able to discuss your submission with your fellow tutees. At the end of the session, you and your tutor will sign the mark form. You should then scan in your signed A10 marking form, and submit it using the handin system.

This assignment will allow you to obtain direct formative feedback from your tutor as well as allowing you to explore the summative marking nature of this type of assessment. This will then be used to inform the self-reflection component of the next writing assignment (A12), so should include areas for improvement and development.

[1] www.ieee.org/documents/ieeecitationref.pdf

The outline Marking Method is given in the Table below:

Section	Specific Criteria		Writing, structure and grammar	
	A	B	C	D
I: Results	Are the results chosen representative of the data? Are summary graphs correctly compiled with error or range bars?	Does the text of this section provide an accessible description of the operation of the experiments? Is it clear what the experimental parameters and settings were for each set of data?	Is this section written in a coherent way so that the relationship between, or the reason for collecting, each set of data is clear?	***Use of words and spelling*** • Are words spelled correctly? • Are words with the correct meaning used in the correct places? • Are the words used simple and free of ambiguous meaning? ***Structure of sentences:*** • Are sentences constructed simply and clearly? • Do sentences clearly state the factual nature of the subject matter? • Do sentences only use complex clause structure where absolutely necessary? ***Flow of paragraphs*** • Are paragraphs correctly structured with beginning and end statements? • Does each paragraph deal with a single concept?
II: Discussion	Is the analysis clearly described? Is it clear how the analytical technique has resulted in interpreted results? Are the analysis data presented clearly?	Are clear conclusions drawn from the analysis? Are the conclusions justified by the results of the analysis? Are they placed in context where appropriate?	Is this section easy to follow? This is in terms of the logical procession from application of the analytical method, through obtaining analysis results to a final conclusion which presents the interpreted findings to the reader.	

3.2 Academic integrity

As detailed in the above Marking Scheme, the discussion, marks and feedback that you receive for your report will be based only on the Results and Analysis sections of your report.

So why are we asking you to also write the Background, Experimental Setup and References section?

The technical report that you submit will be checked for plagiarism and other breaches of academic integrity. While it does not contribute to the mark that you receive for this assignment, you will receive feedback on this. This is the only assignment you will do at University where the penalties for breaching AI regulations will be waived, hence this is a unique opportunity for you to obtain **purely formative** feedback on the Academic Integrity aspect for your work, to support you to improve your practice where needed. We strongly urge you to embrace this opportunity and ensure that you fully understand the university's AI rules and the correct way to engage with external sources.

The time that you invest in writing these additional sections will not be wasted: the A12 assignment that you will undertake in semester 2 will require you to submit a full technical report on the chaotic oscillator lab, and you can reuse the sections that you write here (responding to any feedback that you received).

Electronics and
Computer Science

UNIVERSITY OF
Southampton

A10 Writing 1: Results & Discussion

This form should be used to record the marks for the A10 lab assignment. This form should be completed by the student and countersigned by the tutor following the self-assessment. Please give a mark out of 5 against each criterion and a short sentence or two giving the justification for that mark. This will be used to inform the self-reflection component of the next writing assignment, so should include areas for improvement and development.

Breakdown		**Mark**	**Justification and areas for improvement**
I: Results	**A**		
	B		
	C		
	D		
II: Discussion	**A**		
	B		
	C		
	D		
Total			

Student Name: _____ Signature: _____

Tutor Name: _____ Signature: _____

Date: _____