RESEARCH PROJECT IN MECHANICAL <or MECHATRONICS> ENGINEERING

[Report type]
[Project title]
[Line 2]
[Line 3]

[Your name]

Project Report ME000-2023

Co-worker: [Partner(s) name(s)]

Supervisor: [Dr Supervisor]

Department of Mechanical and Mechatronics Engineering
The University of Auckland

10 April 2023

ME000-2023

PROJECT TITLE GOES HERE

[Your name]

ABSTRACT

Abstract goes here.

DECLARATION

Student

I hereby declare that:

1. This report is the result of the final year project work carried out by my project partner (see cover page) and I under the guidance of our supervisor (see cover page) in the 2023 academic year at the Department of Mechanical and Mechatronics Engineering, Faculty of Engineering, University of Auckland.
2. This report is not the outcome of work done previously.
3. This report is not the outcome of work done in collaboration, except that with a potential project sponsor (if any) as stated in the text.
4. This report is not the same as any report, thesis, conference article or journal paper, or any other publication or unpublished work in any format.

In the case of a continuing project, please state clearly what has been developed during the project and what was available from previous year(s):

Signature:

Date:

Supervisor

I confirm that the project work undertaken by this student in the 2023 academic year is / is not (strikethrough as appropriate) part of a continuing project, components of which have been completed previously. Comments, if any:

Signature:

Date:

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Acknowledgements

Thank important people here.

Glossary of Terms

Term	Definition

Abbreviations

AOA	Angle of attack

1. Introduction

When using APA referencing this is how you add your citation to the end of the line. [1,] [1] stated that this is how you cite something within the sentence.

However, if you're using IEEE referencing style then you only really need to worry about this kind of citation. [1]

1.1 Company

1.2 Competitors

1.3 Timeline

References

[1] J. Smith, "The real world applications of examples in latex documents," Retrieved April 10, 2023 from:
http://example.com, Example University, 2023.

Appendix A The First Appendix

Program A1 Some MATLAB script

```
% Some example matlab code that is probably non functional
% but it is just an example
% John Smith
clear; clc;

omega_c = 0.2*pi;
L = 50;
h = cos(omega_c * (0:L));

[H, W] = freqz(h, 1, 4096);

beta = 1/max(abs(H));

h2 = beta.*cos(omega_c * (0:L));
freqz(h2, 1, 4096);
[H, W] = freqz(h2, 1, 4096);

band = find(abs(H) >= 1/sqrt(2));

fc1 = W(band(1)); % the first cutoff frequency.
fc2 = W(band(end)); % the second cutoff frequency.

fprintf("First cutoff frequency:\n" + ...
    "\tNormalised frequency:\t%.3f PI\n" + ...
    "\tDenormalised frequency:\t%.3f Hz\n\n", ...
    fc1/pi, fc1 * 8000/(2*pi) )

fprintf("Second cutoff frequency:\n" + ...
    "\tNormalised frequency:\t%.3f PI\n" + ...
    "\tDenormalised frequency:\t%.3f Hz\n\n", ...
    fc2/pi, fc2 * 8000/(2*pi) )

fprintf("Passband:\n" + ...
    "\tNormalised frequency:\t%.3f PI\n" + ...
    "\tDenormalised frqquency:\t%.3f Hz\n\n", ...
    (fc2 - fc1)/pi, (fc2 - fc1) * 8000/(2*pi) )
```

Appendix B Second Appendix