## COSC343: Assignment X report

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Introduce the assignment and what it is about. For example, the purpose of this document is to provide a template for your report with examples of commonly used LATEX commands and features. You don't need to repeat all the details of the information provided in the assignment description. The purpose of this is just to provide some context for everything that follows.

## 1 Main body

You probably don't want to call this section "Main body"...but it's essentially what you need to do next – report on the work you've done for your assignment: the approach, results, analysis, and anything else that was asked for in the assignment specification.

You can use the \section{} and \subsection{} commands to organise your document - either break the main body into multiple sections, or have it as a one section with subsections. LATEX handles all the formatting and numbering automatically. Use the \ref{} and \label{} commands for cross-references.

### 1.1 Citing

You might want to cite some sources of your information. For instance, a reference for LATEX can be found here [1].

## 1.2 How to compile LATEX

LATEX documents are prepared using markup language and need to be compiled to produce pdfs.

### 1.3 Tables and Figures

Use the table and tabular commands for basic tables — see Table 1, for example. You can include a figure (JPEG, PNG or PDF) with the \includegraphics command as in the code for Figure 1 below.

#### 1.4 Mathematics

Let  $X_1, X_2, \ldots, X_n$  be a sequence of independent and identically distributed random variables with  $E[X_i] = \mu$  and  $Var[X_i] = \mu$ 

| Item    | Quantity |
|---------|----------|
| Widgets | 42       |
| Gadgets | 13       |

Table 1: An example table.



Figure 1: This is a figure caption.

 $\sigma^2 < \infty$ , and let

$$S_n = \frac{X_1 + X_2 + \dots + X_n}{n} = \frac{1}{n} \sum_{i=1}^{n} X_i$$

denote their mean. Then as n approaches infinity, the random variables  $\sqrt{n}(S_n - \mu)$  converge in distribution to a normal  $\mathcal{N}(0, \sigma^2)$ .

### 1.5 Lists

You can make lists with automatic numbering ...

- 1. Like this,
- 2. and this

... or bullet points ...

- Like this,
- and this

### 2 Conclusion

Concluding remarks. It could be a brief summary and/or comments on what you have learned/enjoyed/struggled with. Depending on the space taken up by figures and formatting the report (excluding the Appendix) should be somewhere in the range of 3-5 pages. Remember, it's not about creative space-wasting to hit the 4 pages, but about reporting on your work and results, so I can tell how much you have done and learned.

### References

[1] Michel Goossens, Frank Mittelbach, and Alexander Samarin. The Late Companion. Addison-Wesley, Reading, Massachusetts, 1993.

# Appendix A Some extra things

If you have anything more to add you might want to add it to the appendix. For instance, some details could detract from readability if placed in the main body of the report, but might still be needed in the appendix for completeness and/or reference. You don't need to have an appendix if you don't think you need one.

**Do not stick code in the appendix** - any code should be submitted as a separate file (.py file for Python code).