Example Document

Oliver Lyon

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1 Introduction

This is an example of how I create a Latex Document.

2 New Section

We can create new section like this.

2.1 New Subsection

We can see that
the slash slash cmd starts a new line. Otherwise if we write a longer sentence
it will automatically wraps around and the edge of the page. If we start a new
line int the code it will not start on a new line.[1]

If we put one blank line in the code in between we will get a new paragraph
with indentation.

2.2 Basic Equations

When it comes to Equation representations Latex is the best! We can use the
begin equation cmd if we want a labeled equation,

$$\alpha = 2\beta + \frac{top}{bottom} \tag{1}$$

Or we can ask to not have the equation labeled begin equation*,

$$\gamma = \frac{top}{\frac{middle}{bottom}}$$

We can even do Matrices cleanly,

$$\begin{pmatrix} u_1 \\ \dot{u}_1 \\ u_2 \\ \dot{u}_2 \end{pmatrix} = \begin{pmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \end{pmatrix}$$

$$\begin{pmatrix} u_1 & y \\ \dot{u}_1 & y \\ u_2 & y \\ \dot{u}_2 & y \end{pmatrix}$$

An import note if you try to use math notation outside of the equation Latex gets angry. You need to wrap it in Dollar signs.
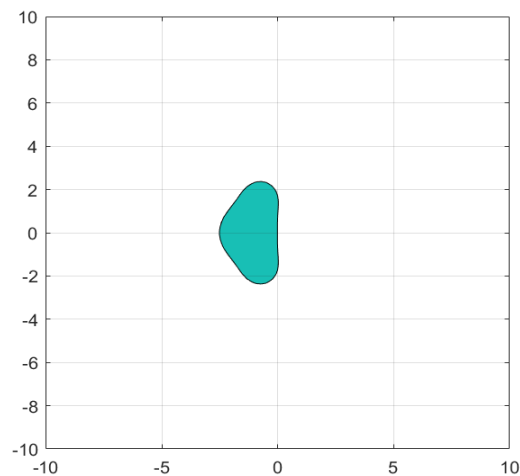
3 Display Code

To display code I find it best to use a package and an example to display it that could be found online. The other option is to use begin verbatim.

```
Everything inside verbatim will print EXACTLY the way it is written even if it goes off the
```
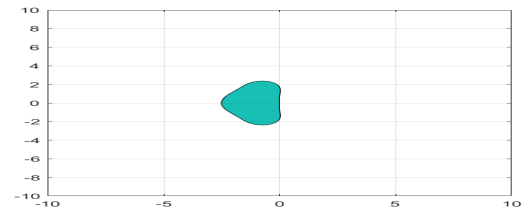
```
        Also best part is we can use latex cmd characters $$$
        \\\\\\\ also % make comments
```

4 Images

The best guide to images is the one provided by share tex but you can control the size of the images as you put it in the image.

images are also impacted by the paragraph blank lines. LONGER writing to

demonstrate the paragraph issues

5 Conclusion

This is a very basic introduction to latex I hope this helps!

References

[1] NAME, *Title*, Credits