

# A Demonstration

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Of my BMC, created thanks to  $\text{\LaTeX}$

tecosaur  
Of Github

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# 1 This is a Chapter



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## 1.1 Content

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**i About this**  
This is Lorem Ipsum

### 1.1.1 More content

Cras eu sapien ut ipsum commodo placerat ac at diam. Aliquam suscipit urna nec condimentum iaculis. Duis hendrerit eros ac gravida tincidunt. Praesent orci odio, pulvinar sed metus ac, scelerisque tincidunt elit. Donec pharetra sit amet diam eu pellentesque. Praesent quis volutpat arcu. Aliquam auctor finibus vestibulum. Suspendisse accumsan porttitor neque, at tincidunt ex pharetra nec. Phasellus ac dolor eget nunc mattis ultricies. In et tellus vel magna accumsan varius eu nec leo. Curabitur odio dolor, porttitor in lectus sed, consequat consectetur elit. Morbi vel quam a elit mattis consequat ac vitae enim. Nullam condimentum turpis vel purus pretium, at viverra nibh gravida. Aenean quis enim ac mi euismod vehicula.



#### Relevant Info

In publishing and graphic design, lorem ipsum is a placeholder text used to demonstrate the visual form of a document without relying on meaningful content (also called *greeking*)

### 1.1.2 Another subsection

Nam nec nisl tristique, pellentesque magna non, pretium nunc. Nunc non leo sapien. In hac habitasse platea dictumst. Cras laoreet augue lacus, nec cursus ante lobortis nec. Aliquam at neque ut quam consectetur hendrerit. Sed eu nibh at ipsum aliquam volutpat non ut mi. Integer sed tortor ut justo lobortis scelerisque. Nunc in gravida tortor, euismod tincidunt orci. Mauris euismod leo eget leo auctor, sed faucibus tellus gravida.

## 1.2 Some Code

```

1  import numpy as np
2
3  def incmatrix(genl1,genl2):
4      m = len(genl1)
5      n = len(genl2)
6      M = None # to become the incidence matrix
7      VT = np.zeros((n*m,1), int) # dummy variable
8
9      # compute the bitwise xor matrix ( $\vee$ )
10     M1 = bitxormatrix(genl1)
11     M2 = np.triu(bitxormatrix(genl2),1)
12
13     for i in range(m-1):
14         for j in range(i+1, m):
15             [r,c] = np.where(M2 == M1[i,j])
16             for k in range(len(r)):
17                 VT[(i)*n + r[k]] = 1;
18                 VT[(i)*n + c[k]] = 1;
19                 VT[(j)*n + r[k]] = 1;
20                 VT[(j)*n + c[k]] = 1;
21
22             if M is None:
23                 M = np.copy(VT)
24             else:
25                 M = np.concatenate((M, VT), 1)
26
27             VT = np.zeros((n*m,1), int)
28
29     return M
30
31 print("this is a really long line, as far as lines go;
    ↪ as such I fully expect it to be split onto a second
    ↪ line by minted")

```

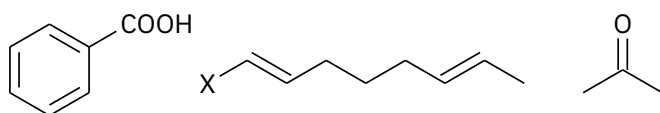
## 1.3 Some Maths

$$\begin{aligned}
 \mathcal{L}[e^{-at} \sin(\omega t)](s) &= \int_0^{\infty} e^{-st} e^{-at} \sin(\omega t) dt \\
 &\text{using } \sin(\omega t) = \frac{1}{2i} (e^{i\omega t} - e^{-i\omega t}) \\
 &= \frac{1}{2i} \int_0^{\infty} e^{-st-at+i\omega t} - e^{-st-at-i\omega t} dt \\
 &= \frac{1}{2i} \left[ \frac{e^{-(s+a-i\omega)t}}{-(s+a-i\omega)} - \frac{e^{-(s+a+i\omega)t}}{-(s+a+i\omega)} \right]_0^{\infty} \\
 &\text{If } s > -a \Rightarrow -s-a < 0 \Rightarrow \lim_{t \rightarrow \infty} e^{-(s+a+i\omega)t} = 0 \text{ so,} \\
 &= \frac{1}{2i} \left( \frac{1}{(s+a)-i\omega} - \frac{1}{(s+a)+i\omega} \right) \\
 &= \frac{\omega}{(s+a)^2 + \omega^2}
 \end{aligned}$$

### ? I have some questions

What even is a laplace transform? Why is the sky blue?

## 1.4 A Molecule or Two



# 2 A Second Chapter



## Summary

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## 2.1 More Text

Nunc eros quam, scelerisque vel metus vitae, gravida dapibus tellus. Nunc tincidunt libero et faucibus cursus. Sed sed felis congue, pharetra quam non, gravida urna. Cras ultrices mattis justo sit amet porta. Praesent efficitur sed quam quis varius. Etiam non laoreet lorem, nec efficitur nunc. Nulla nunc nisi, aliquet ac tellus aliquet, auctor sagittis lectus. Quisque interdum mattis facilisis.

### Warning

This paragraph has been reused.

## 2.2 Where Would We Be Without Ipsum?

Lipsum is a scrambled latin text [https://en.wikipedia.org/wiki/Lorem\\_ipsum](https://en.wikipedia.org/wiki/Lorem_ipsum). Praesent dapibus vulputate leo eu facilisis. Donec et libero felis. Etiam sollicitudin, odio non sodales lacinia, felis lacus porttitor diam, non hendrerit nisi quam sed lacus. Aliquam erat volutpat. Morbi nisi dui, scelerisque sit amet finibus sed, sollicitudin in erat. Maecenas ac viverra ante, eu malesuada neque. Mauris commodo nisl nec magna pulvinar ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit.



### A tip

Is sometimes useful



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### Check this

Checking things can be a good idea

## 2.3 Sectioning

This is an introduction to a section displaying different section commands

### 2.3.1 A Demo

More specifically this is a demo of section, subsection, subsubsection, paragraph, and subparagraph.

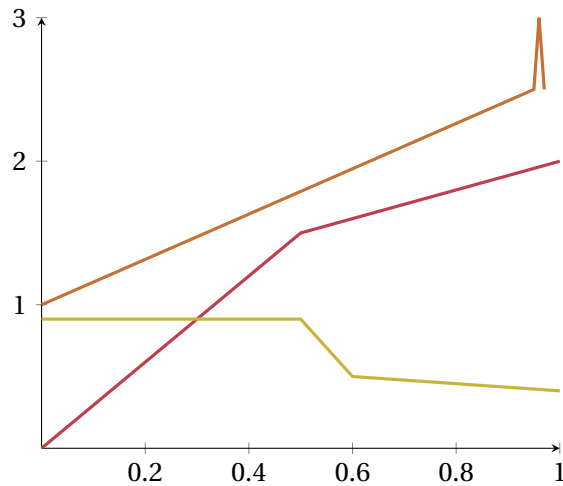
### Now onto paragraphs

Occasionally one delves into the depth of paragraph and subparagraphs.

**A Paragraph** For instance this is a paragraph.

**A Subparagraph** Sometimes, even a paragraph isn't deep enough.

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### ✖ Big Issue

Critical stuff needs to be paid attention to

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### Hmm, this isn't the best

Different lorem ipsum paragraphs would probably be better

## 2.4 Colour Theme



### 2.4.1 Other Defined Colours

Grey	LightGrey	DarkGrey
Red	LightRed	DarkRed
Yellow	LightYellow	DarkYellow
Blue	LightBlue	DarkBlue
Green	LightGreen	DarkGreen
Orange	LightOrange	DarkOrange
Purple	LightPurple	DarkPurple
Cyan	LightCyan	DarkCyan

# 3 A Third Chapter



Summary