

The next cell runs a program that calculates \sqrt{x} .

```
import math

x = 49
print(math.sqrt(x))

7.0
```

The next cells list the contents of the /bin directory and echo an unset repeated message respectively.

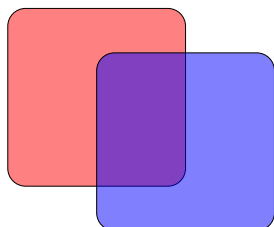
```
!ls /bin

message = 'Test message.'
foo = !unset message && echo -e '{message}\n{me:
foo

['Test message.', 'Test message.', 'Test
message.', 'Test message.']
```

The next cell uses html features to create an image when ran.

```
%%html
<svg xmlns="http://www.w3.org/2000/svg" viewBox=
<rect x="80" y="60" width="200" height="200" rx=
<rect x="180" y="110" width="200" height="200"
</svg>
```



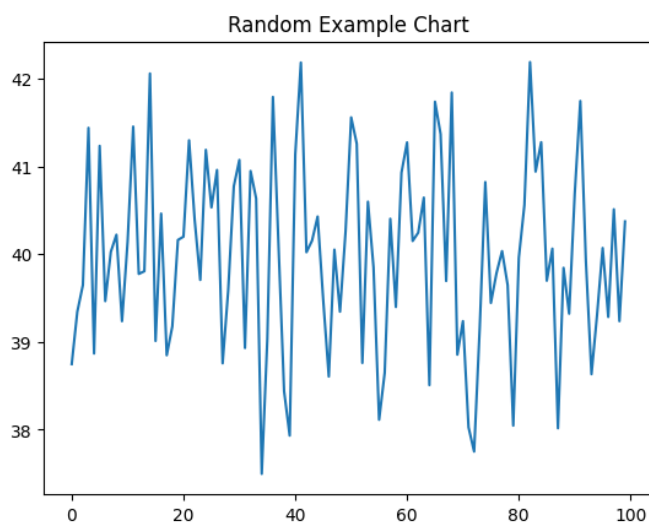
The next cell runs perfectly because of colab's exception handling.

```
x = 0
y = 5
z = x/y
```

The next cell creates a random chart.

```
import numpy as np
from matplotlib import pyplot as plt

ys = 40 + np.random.randn(100)
x = [x for x in range(len(ys))]
plt.plot(x, ys, '-')
plt.fill_between(x, ys, 195, where=(ys > 195), facecolor='g', alpha=0.6)
plt.title("Random Example Chart")
plt.show()
```

**Andrew Stevens**

5:14 PM Today

This code doesn't have an output because of a ZeroDivisionError, but it still completes execution successfully.

This cell will be dedicated to demonstrating markdown language.

Basic Markdown

This is bold text.

This is italicized text.

This is monospace text.

~~This is strikethrough text.~~

[This is a link to Google.](#)



This is indented text.

This is more indented
text.

This is
even
more
indented
text.

1. First item
2. Second item
3. Third item

- First item
- Second item
- Third item

Column One	Column Two
------------	------------

Item One	Item One
----------	----------

Item Two	Item Two
----------	----------

Code and Math

```
print("This python code is embedded in text.")
```

Here are some math operations in markdown.

$$y = x^2$$

$$\ln(e^x) = 0$$

$$\sum_{n=0}^{\infty} \frac{1}{n!}$$

$$\frac{\overset{\cdot\cdot}{k!(n-k)!}}{\overset{\cdot\cdot}{k}} = \overset{\cdot\cdot}{(k)}$$

$$A_{m,n} = \begin{pmatrix} a_{1,1} & a_{1,2} & \cdots & a_{1,n} \\ a_{2,1} & a_{2,2} & \cdots & a_{2,n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m,1} & a_{m,2} & \cdots & a_{m,n} \end{pmatrix}$$