Creating Slides

Abdul Saboor[1], Unknown Author[2]

Dec 31, 2025

[1]My University is somewhere in the middle of nowhere
[2]Their University is somewhere in the middle of nowhere

Right click (or click on footer) to open context menu and click on ⓘ icon for instructions.

≙ Show Code

Markdown

```
# Creating Slides
::: align-center width=50%
    alert`Abdul Saboor`^`1`, Unknown Author^`2`
    center`//today``//`
    ::: align-left text-box
        ^`1`My University is somewhere in the middle of nowhere
        ^`2`Their University is somewhere in the middle of nowhere

```

Contents

Introduction

To see how commands work, use `Slides.docs()` to see the documentation. Here we will focus on using some of that functionality to create slides.

> **Info**
>
> This slide was built purely from markdown, so you can create a variable `test` to overwite this →

```
Exception: Could not resolve '%{test}':
NameError: name 'test' is not defined
You can update this variable by `Slides[int,|list|slice].vars.update` or by defining it i
n notebook if `Auto Rebuild` is enabled.
```

Version: `6.9.0`

Contents

This is summary for current section created using block syntax of toc. See `Slides.xmd.syntax` for details.

- Item 1
- Item 2

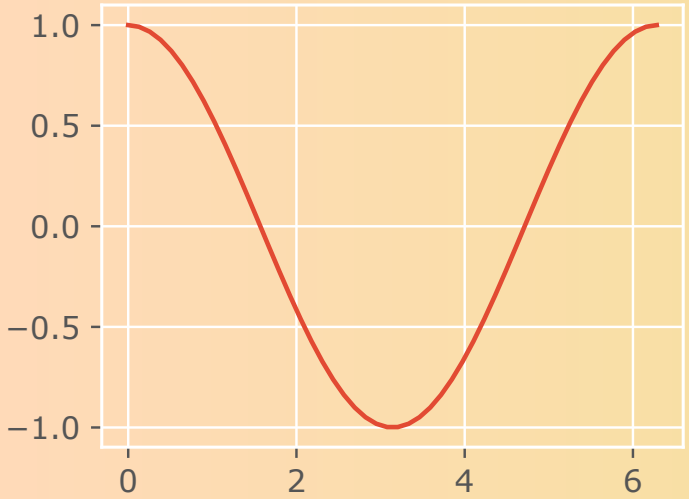
$$E = mc^2$$

> 💡 Tip
>
> Above `btn` variable can be updated later via `Slides[number,].vars.update` method.

Markdown

```
section`Adding informative TOC`
```columns .block-blue
toc[True]`### Contents`
+++
vspace`1` This is summary for current section created using block syntax of toc. See `Slides.xmd.synt
```
```

Plotting with Matplotlib



Double click on the plot to focus on it!

Python

```python
sl.set_css(bg1 = 'linear-gradient(to right, #FFDAB9
import numpy as np, matplotlib.pyplot as plt
plt.rcParams['svg.fonttype'] = 'none' # Global setti
x = np.linspace(0,2*np.pi)
with plt.style.context('ggplot'):
    fig, ax = plt.subplots(figsize=(3.4,2.6))
    _ = ax.plot(x,np.cos(x))
slides.write(ax, s.focus([0,3,4]))
slides.write('Double click on the plot to focus on i
```

Writing Pandas DataFrame

	sepal_length	sepal_width	petal_length	petal_width
count	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333
std	0.828066	0.435866	1.765298	0.762238
min	4.300000	2.000000	1.000000	0.100000
25%	5.100000	2.800000	1.600000	0.300000
50%	5.800000	3.000000	4.350000	1.300000
75%	6.400000	3.300000	5.100000	1.800000
max	7.900000	4.400000	6.900000	2.500000

Python

```python
try:
    import pandas as pd
    df = pd.read_csv('https://raw.githubusercontent.com/mwaskom/seaborn-data/master/iris.csv')
    df = df.describe() #Small for display
except:
    df = '### Install `pandas` to view output'
```

Writing Plotly Figure

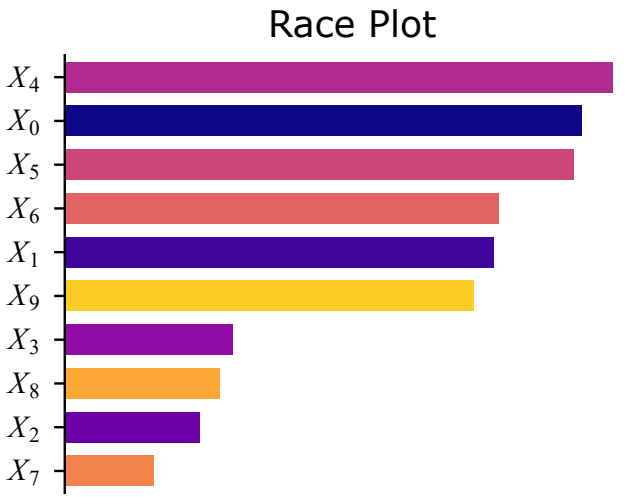
Install `plotly` to view output

Python

```python
try:
    import ipywidgets as ipw
    import plotly.graph_objects as go

    fig = slides.patched_plotly(go.FigureWidget()) # prefere Widget for interactivity and correct display
    fig.add_trace(go.Bar(y=[1,5,8,9], customdata=["A","B"]))

    # We have clicked and selected traits on patched plotly
    html = ipw.HTML()

    def observe_click(change):
        html.value = "<br/>".join(f"  {k} = {v}" for k, v in change['new'].items())

    fig.observe(observe_click, names='clicked')
    box = ipw.HBox([fig, html])

except:
    box = '### Install `plotly` to view output'
```

Refreshable Content

Use refresh button below to update plot! See race_plot function at end of slides.



A Silly Plot

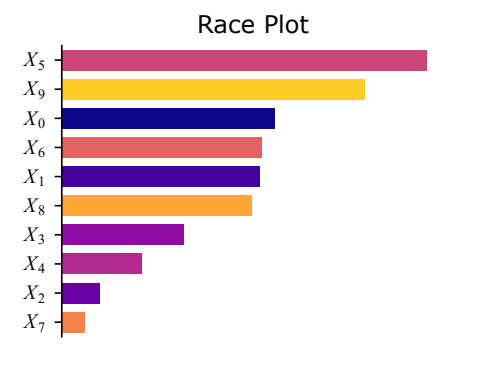
Refresh Plot

Python

```
slides.write('''
    ## Refreshable Content
    Use refresh button below to update plot!
    See alert`race_plot` function at end of slides.
    ''')

def display_plot(btn): return race_plot().display()

slides.write(
    slides.dl.interactive(display_plot, btn = slides
    rslide.get_source()
) # Only first columns will update
```

Animations with Widgets

anim 6 Animation Frame: 6



A Silly Plot

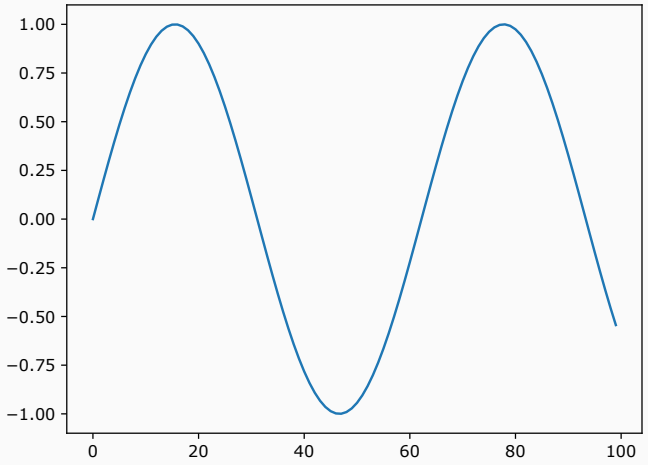
Python

```python
slides.write('## Animations with Widgets')
anim = slides.AnimationSlider(nframes=20, interval=1500, 
css = {'grid-template-columns': '1fr 2fr', '.out-main': {

@slides.dl.interact(post_init = lambda self: self.set_css(
def _(html, source, anim):
    html.value = race_plot().value
    print(f'Animation Frame: {anim}') # goes to output ar
```

Rich Content `ListWidget`

Execute a code block

```
lambda: print(np.random.random((10,2))),
lambda: plt.plot(np.random.random((10,2))),
def plot_sine():
    plt.plot(np.sin(np.linspace(0,10,100)))
```



Python

```python
import numpy as np
import matplotlib.pyplot as plt

def plot_sine():
    plt.plot(np.sin(np.linspace(0,10,100)))

lw = slides.ListWidget(description='Execute a code b
    options = [
        lambda: print(np.random.random((10,2))),
        lambda: plt.plot(np.random.random((10,2))),
        plot_sine,
    ], transform = lambda value: slides.code(value)
)

def run(c):
    if callable(c): c() # avoid None value when not
    plt.show()

css = {'.out-main': {'height':'300px'}, 'grid':'auto
it = slides.dl.interactive(run, c = lw, post_init =
```

Contents

Animating Matplotlib!

→ Skip All Next Frames

Python

```python
for idx in slides.PAGE.iter(range(10,19)):
    fig, ax = plt.subplots(figsize=(3.4,2.6))
    x = np.linspace(0,idx,50)
    ax.plot(x,np.sin(x))
    ax.set_title(rf'$f(x)=\sin(x)$, 0 < x < {idx+1}')
    ax.set_xlim([0,18])
    ax.set_axis_off()
    slides.write(s.focus([idx - 10]),ax,widths=[60,40])

    if idx == 10:
        slides.write('Unlike `interact/interactive`, this anim
```

$f(x) = \sin(x),\ 0 < x < 11$

Tip

Unlike `interact/interactive`, this animation is based on slide frames, all of which are exported to HTML.

Animating Matplotlib!

→ Skip All Next Frames

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for idx in slides.PAGE.iter(range(10,19)):
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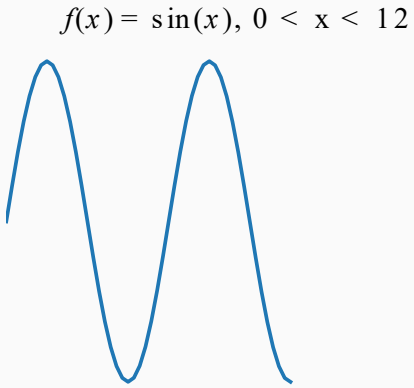

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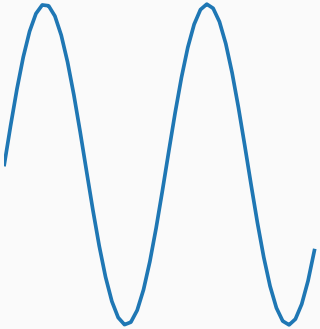
```

$f(x) = \sin(x),\ 0 < x < 13$



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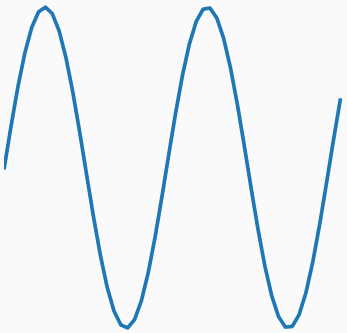
$f(x) = \sin(x),\ 0 < x < 14$



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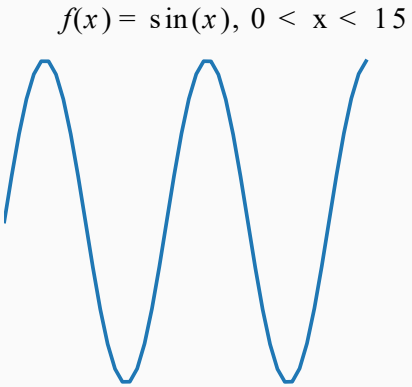

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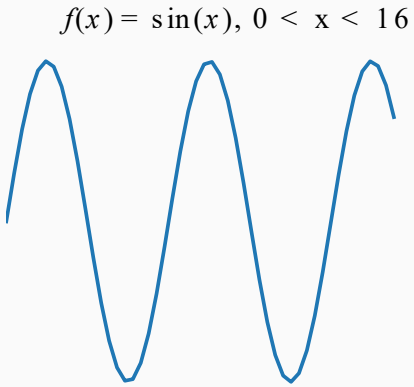

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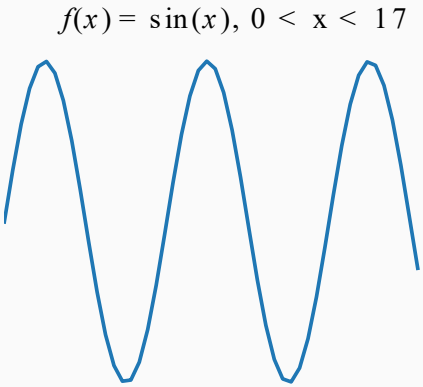

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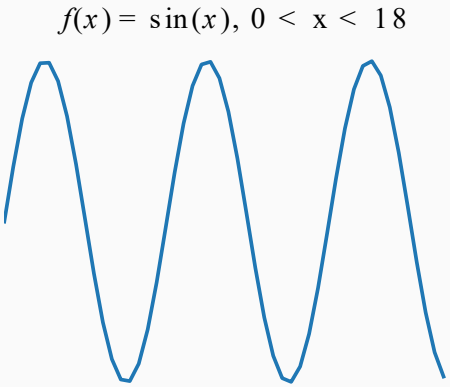

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```
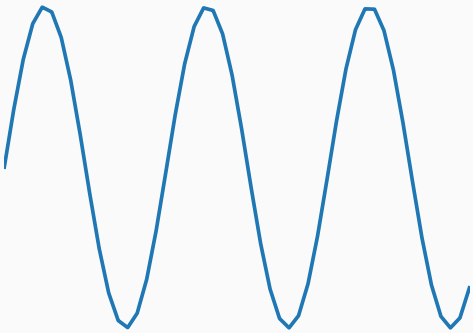

$f(x) = \sin(x),\ 0 < x < 19$



Contents

Frames with

`PAGE.iter()` and Fancy Bullet List

Python

```python
slides.write('# Frames with \n#### code`PAGE.iter()` and Fancy Bullet List yoffset`0`')
s.get_source().focus([2,3,4]).display()
slides.PAGE() # want to show source alone first
for item in slides.PAGE.iter(boxes):
    slides.bullets([item], marker='💘', css_class='anim-group anim-slide-left').display()
```

Frames with

`PAGE.iter()` and Fancy Bullet List

Python

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💘 1

Frames with

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```

💘 2

Frames with

`PAGE.iter()` and Fancy Bullet List

Python

```
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```

💘 3

Frames with

`PAGE.iter()` and Fancy Bullet List

Python

```
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```

- 4

Frames with

`PART.iter()` and 2x2 grid of boxes

Python

```
slides.write('# Frames with \n#### code`PART.iter()` and 2x2 grid of boxes')
s.get_source().focus(range(2,7)).display()
objs = [boxes[:2],boxes[2:]]
widths = [(1,3),(3,2)]
for ws, cols in slides.PART.iter(zip(widths,objs)):
    slides.write(*cols, widths=ws, css_class='anim-group anim-wipe-right')
```

Frames with

`PART.iter()` and 2x2 grid of boxes

Python

```
slides.write('# Frames with \n#### code`PART.iter()` and 2x2 grid of boxes')
s.get_source().focus(range(2,7)).display()
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```

1

Frames with

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Python

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```

1

2

Frames with

`PART.iter()` and 2x2 grid of boxes

Python

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s.get_source().focus(range(2,7)).display()
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```

1

2

3

Frames with

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```

1

2

3

4

← Skip Previous Frames

Watching Youtube Video?

Want to do some drawing instead? Click on button on the right!

≚ Show Code

Blocks with CSS classes

Table

h1	h2	h3
d1	d2	d3
r1	r2	r3

Widgets

0

Click to do nothing

Select to do nothing

A rich content table

h1	h2	h3
)	2	3
3	`import numpy as np`	5

Show Code

$LaTeX$ in Slides

Use `$ $` or `$$ $$` to display latex in Markdown, or embed images of equations $LaTeX$ needs time to load, so keeping it in view until it loads would help.

> 💡 Tip
>
> Varibale formatting alongwith $LaTeX$ %{var} → 'I was a variable' is seamless.

$\LaTeX$ in Slides

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Use `$ $` or `$$ $$` to display latex in Markdown, or embed images of equations $\LaTeX$ needs time to load, so keeping it in view until it loads would help.

$$\int_0^1 \frac{1}{1-x^2} dx$$

$\LaTeX$ in Slides

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$$\int_0^1 \frac{1}{1-x^2}dx$$

$$ax^2 + bx + c = 0$$

$LaTeX$ in Slides

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$$\int_0^1 \frac{1}{1-x^2}dx$$

$$ax^2 + bx + c = 0$$

≙ Show Code

Markdown

````
++
```columns 50 50 anim-group anim-slide-up
$$ \int_0^1\\frac{1}{1-x^2}dx $$
{.align-left .text-big .info}
+++
::: success
    $$ ax^2 + bx + c = 0 $$
    {.text-huge}
```
````

Serialize Custom Objects to HTML

This is useful for displaying user defined/third party objects in slides

0 1 2 3 4 5 6 7 8 9

Python

```python
slides.write('## Serialize Custom Objects to HTML\nThis is useful for displaying user defined/third party obje
with slides.suppress_stdout(): # suppress stdout from register fuction below
    @slides.serializer.register(int)
    def colorize(obj):
        color = 'red' if obj % 2 == 0 else 'green'
        return f'<span style="color:{color};">{obj}</span>'
    slides.write(*range(10))

some_slide.get_source().display()
```

This is all code to generate slides

Python

```python
def demo(self):
    "Demo slides with a variety of content."
    from .._demo import demo_slides
    return demo_slides(self)
```

e:\development\ipyslides\ipyslides_demo.py

```python
# Author: Abdul Saboor
# This demonstrates that you can generate slides from a .py file too, which you can import in notebook.

def demo_slides(slides):
    slides.close_view() # Close any previous view to speed up building (minor effect but visually better)
    slides.clear() # Clear previous content
    raw_source = slides.code.cast(__file__).raw
    N = raw_source.count('.build') + raw_source.count('\n---')
    slides.create(range(N)) # Create slides first, this is faster

    slides.settings.footer.text = slides.get_logo("1em") + 'Author: Abdul Saboor عبدالصبور'
    slides.set_citations(r'''
       @pf: This is refernce to FigureWidget using alert`cite\`pf\`` syntax
       @This: I was cited for no reason
    ''')

```

Source Code

Markdown: Slide 0

```
```md-src.collapsed
# Creating Slides
 ::: align-center width=50%
    alert`Abdul Saboor`^`1`, Unknown Author^`2`
    center`//today``//`
     ::: align-left text-box
         ^`1`My University is somewhere in the middle of nowhere
         ^`2`Their University is somewhere in the middle of nowhere

::: display align-center
    vspace`2`Right click (or click on footer) to open context menu and click on fa`info` icon for i
```
<md-src/>
```

Markdown: Slide 1

```
section`Introduction` toc`### Contents`
```

Markdown: Slide 2

```
# Introduction

To see how commands work, use code`Slides.docs()` to see the documentation.
Here we will focus on using some of that functionality to create slides.
```