

Complete Guide to Quarto Features

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Quarto is an open-source scientific and technical publishing system that brings computational

documents, presentations, dashboards, and books. This page showcases its most powerful features!

1. Formatted Text & Styling

You can use **bold text**, *italic text*, ~~strikethrough~~, and `inline code`.

Lists and Formatting

Here's an unordered list: - Feature 1 - Feature 2 - Nested item - Another nested item - Feature 3

And an ordered list: 1. First item 2. Second item a. Sub-item one b. Sub-item two 3. Third item

2. Callout Blocks

Note

This is a note callout. Use these for general information that might be helpful.

Warning

This is a warning callout. Use for important cautions or warnings.

Important

This callout highlights crucial information that should not be missed.

Pro Tip

These are helpful tips and tricks for better usage.

Caution

Use caution callouts for potentially dangerous operations.

3. Mathematical Equations

Inline Mathematics

The famous equation $E = mc^2$ shows the equivalence of mass and energy. The Pythagorean theorem states that $a^2 + b^2 = c^2$.

Display Mathematics

The quadratic formula is:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

The Euler formula connects trigonometry and exponentials:

$$e^{i\theta} = \cos(\theta) + i \sin(\theta)$$

4. Code Blocks with Syntax Highlighting

Python Example

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

# Generate data
x = np.linspace(0, 2*np.pi, 100)
y = np.sin(x)

# Plot
plt.figure(figsize=(10, 6))
plt.plot(x, y, 'b-', linewidth=2)
plt.title('Sine Wave')
plt.xlabel('x')
plt.ylabel('sin(x)')
plt.grid(True, alpha=0.3)
plt.show()
```

JavaScript Example

```
function fibonacci(n) {  
  if (n <= 1) return n;  
  return fibonacci(n - 1) + fibonacci(n - 2);  
}  
  
const result = fibonacci(10);  
console.log(`Fibonacci(10) = ${result}`);
```

Bash Example

```
#!/bin/bash  
  
# List all Python files  
find . -name "*.py" -type f  
  
# Install dependencies  
pip install -r requirements.txt  
  
# Run tests  
pytest tests/
```

5. Tables

Feature	Description	Difficulty
Markdown	Basic formatting	Easy
Math Equations	LaTeX rendering	Medium
Code Execution	Live Python/R	Medium
Dashboards	Interactive visualizations	Hard
Websites	Multi-page sites	Medium

6. Tabsets

Tab 1: Python

```
# Python example
def hello_world():
    print("Hello, Quarto!")

hello_world()
```

Tab 2: R

```
# R example
hello_world <- function() {
  print("Hello, Quarto!")
}

hello_world()
```

Tab 3: Julia

```
# Julia example
function hello_world()
    println("Hello, Quarto!")
end

hello_world()
```

7. Executable Code Cells

You can embed code that gets executed when rendering:

```
# Simple data analysis example
import pandas as pd
import numpy as np

# Create sample data
data = {
    'Name': ['Alice', 'Bob', 'Charlie', 'Diana'],
    'Age': [25, 30, 35, 28],
    'Salary': [50000, 60000, 75000, 55000]
}
```

```
df = pd.DataFrame(data)
print("Employee Data:")
print(df)
print("\nStatistics:")
print(df[['Age', 'Salary']].describe())
```

8. Images and Figures

You can include images with captions and links:



Figure 1: Quarto Logo

9. Block Quotes

“The only way to do great work is to love what you do.” — Steve Jobs

This is a longer block quote that spans multiple lines.

It can contain multiple paragraphs and demonstrate the use of block quotes in Quarto documents.

10. Horizontal Rules



Above is a horizontal rule, useful for visual separation.

11. Links and References

Here are some useful links: - [Quarto Official Website](#) - [Quarto Documentation](#) - [GitHub Repository](#)

12. Footnotes

This text has a footnote¹.

13. Definition Lists

Term 1 Definition of the first term

Term 2 Definition of the second term, which can span multiple lines
and have multiple definitions

14. Special Features Summary

Feature	Use Case	Example
Callouts	Highlight important information	Warnings, tips, notes
Math	Scientific equations	Physics, statistics, ML
Code Execution	Live examples	Data analysis, visualizations
Tabsets	Multiple options	Language examples, comparisons
Cross-references	Navigation	Section links, citations

15. Advanced Customization

Customization Options

Quarto documents can be heavily customized: - Custom CSS styling - Theme selection (light/dark modes) - Layout options (sidebar, margin notes) - Custom templates - Bibliography and citation management

Getting Started with Quarto

To create your own Quarto document:

1. **Install Quarto:** Download from quarto.org
2. **Create a document:** `quarto create project my-project`
3. **Write content:** Use markdown with optional code blocks

¹This is the footnote content. It can contain multiple paragraphs and formatted text.

4. **Render:** `quarto render document.qmd`
5. **Publish:** Deploy to GitHub Pages, Netlify, or Posit Cloud

Next Steps

! Important

Now that you've seen what Quarto can do: - Explore the [Pinball Loss example](#) with interactive Python code - Read more advanced features in the [official documentation](#) - Create your own technical documentation with Quarto!

Happy documenting with Quarto!