Short Notes Test Document

Your Name

2025-02-06

1 📝 Introduction

This is an example of a **Short Notes document** using the NMU template. It demonstrates key features such as structured sections, example boxes, mathematical notation, and inline code.

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2 📌 Basic Formatting

2.1 🔹 Lists

- Bullet points are useful for key ideas.
- Numbered lists help organize steps:

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

2.2 🔹 Text Formatting

- **Bold Text**
- *Italic Text*

- `Inline code` example

  💡 **Tip:** Use # for headings and ∗ for italics.

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3 📖 Mathematics & Equations

Mathematical expressions can be **inline** like this:
"The equation of a line is $y = mx + c$."

Or **displayed** in a block:

$$E = mc^2$$

You can have aligned equation environments: β

$$f(\beta) = (y - X\beta)'(y - X\beta)$$
$$f'(\beta) = \frac{d}{d\beta}$$

🛠️ **Try it!** Modify the equation to explore different formatting.

🏆 Theorem & Proof Example

Theorem 3.1 (Pythagoras' Theorem)**:** *In a right-angled triangle with sides a and b, and hypotenuse c:*

$$a^2 + b^2 = c^2$$

Proof:

By applying the properties of similar triangles, we derive:

$$a^2 + b^2 = c^2$$

Thus, the theorem holds.

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4 📦 Custom Boxes

Different types of **callout boxes** highlight important information.

📊 Example

The Fibonacci sequence starts as follows:

$$0, 1, 1, 2, 3, 5, 8, 13, \ldots$$

🌟 Important

Understanding how to apply formulas is essential in problem-solving.

⚠️ Warning

Be careful when applying formulas—always check your assumptions!

✅ **Test it!** Try adding your own **definitions** or **examples**.

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5 🖥️ Code Blocks in R

You can include **R code** like this:

```
fib <- function(n) {
  if (n <= 1) return(n)
  return(fib(n-1) + fib(n-2))
}

fib(10) # Compute the 10th Fibonacci number
```

```
## [1] 55
```

🎯 **Tip:** Modify the function to calculate a different number.

6 🎯 Conclusion

This **Short Notes template** makes it easy to create well-structured, professional-looking documents for teaching, learning, and research. 🚀

> 🎓 **Now, try editing this document to make it your own!**

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7 📌 Final Thoughts

This skeleton is **beginner-friendly** while still showcasing all key features of the **Short Notes** template. Let me know if you'd like any refinements! 🚀