A sample document to show the preamble

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Contents

1 Environments

1.1 Definitions

Definition An environment is a structure used to format blocks of text in LaTeX documents.

The definition environment is used to describe new and unfamiliar terms.

1.2 Notes

Note The syntax highlighting plugin being used for this preamble is called *listings*

The note environment is used for additional information that may be of interest to a reader, but should not be essential.

1.3 Question

Question What is the formula for Pythagoras' theorem?

The question environment is used for prompting the user to consider a point of view.

1.4 Answer

Answer The formula for Pythagoras's theorem is

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

This is frequently used for calculating the *hypotenuse* of any triangle with a right angle.

The answer environment provides a solution for early prompted questions.

1.5 Danger

Danger To compile LaTeX documents you need to make sure you've installed all the required packages!

The danger environment provides warnings about common pitfalls which make cause issues for the reader.

1.6 Exercises

Exercise 1: Hello World!

```cpp
#include <iostream>

int main(int argc, char** argv)
{

    using namespace std;

    // TASK: Print "hello world!" to the terminal

    return 0;
}
```

Exercises can provide code and feature syntax highlighting.

1.7 Solutions

Solution 1: Hello World!

```cpp
#include <iostream>

int main(int argc, char** argv)
{

    using namespace std;

    cout << "hello world!" << endl;

    return 0;
}
```

Solutions provide the completed code for the corresponding exercise.