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[ **Title** ]

[ Class Code ]

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[ Your Name ]  
[your@email]

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February 8, 2025

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1:

## 1 Code example using listings package

```
1 public class HelloWorld {  
2     public static void main(String[] args) {  
3         System.out.println("Hello, World!");  
4     }  
5 }
```

## 2 List example using enumitem package

- i. First item
- ii. Second item
- iii. Third item

## 3 Figure example using subfigure package



(a) Subfigure 1

(b) Subfigure 2

Figure 1: Caption for the subfigures.

2:

## 4 Example of cprotect Usage

### 4.1 Using cprotect in Section Titles

Sometimes, you may want to include special characters or commands in section titles. For example, the following section title includes a LaTeX command:

#### 4.1.1 Displaying `\texttt{cprotect}` in a Section Title

### 4.2 Using cprotect in Captions

You can also use `cprotect` to include special characters or commands in figure or table captions. Here is an example:



Figure 2: This is a caption with a LaTeX command: `\texttt{cprotect}`

## 5 Example of xcolor Usage in Code Listings

```
1 \definecolor{codegreen}{rgb}{0,0.6,0}
2 \definecolor{codegray}{rgb}{0.5,0.5,0.5}
3 \definecolor{codepurple}{rgb}{0.58,0,0.82}
4 \definecolor{backcolour}{rgb}{0.95,0.95,0.92}
5
6 \lstdefinestyle{mystyle}{
7     backgroundcolor=\color{backcolour},
8     commentstyle=\color{codegreen},
```

```
9      keywordstyle=\color{magenta},
10     numberstyle=\tiny\color{codegray},
11     stringstyle=\color{codepurple},
12     basicstyle=\ttfamily\footnotesize,
13     breakatwhitespace=false,
14     breaklines=true,
15     captionpos=b,
16     keepspaces=true,
17     numbers=left,
18     numbersep=5pt,
19     showspaces=false,
20     showstringspaces=false,
21     showtabs=false,
22     tabsize=2
23 }
24
25 \lstset{style=mystyle}
```

c.

## 6 Example of amsmath Package Usage

e

The `amsmath` package provides various features to display mathematical expressions. Here are some examples:

### 6.1 Aligning Equations

The `align` environment allows you to align equations at the equal sign or any other character:

$$a + b = c \tag{1}$$

$$d + e = f \tag{2}$$

### 6.2 Matrices

The `bmatrix` environment allows you to create matrices with brackets:

$$\mathbf{A} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

### 6.3 Cases

The `cases` environment is useful for piecewise-defined functions:

$$f(x) = \begin{cases} x^2 & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$

## 6.4 Fractions

You can use the `\frac` command to create fractions:

$$\frac{a}{b}$$

## 6.5 Multiline Equations

The `multline` environment allows you to break long equations into multiple lines:

$$\begin{aligned} & a + b + c + d + e + f + g + h + i + j + k + l + m + n + o + p + q + r + s + t + u + v + w + x + y + z \\ & = 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20 + 21 + 22 + 23 + 24 + 25 + 26 \end{aligned} \quad (3)$$

*d.*

## 7 Example of amssymb Package Usage

The `amssymb` package provides various additional mathematical symbols. Here are some examples:

### 7.1 Set Notations

$$\mathbb{N} \quad \mathbb{Z} \quad \mathbb{Q} \quad \mathbb{R} \quad \mathbb{C}$$

### 7.2 Logic Symbols

$$\forall \quad \exists \quad \neg \quad \wedge \quad \vee \quad \Rightarrow \quad \Leftrightarrow$$

### 7.3 Other Symbols

$$\hbar \quad \ell \quad \imath \quad j \quad \square \quad \diamond \quad \aleph \quad \beth$$

## 8 Example of pdfpages Package Usage

The `pdfpages` package allows you to include pages from external PDF documents into your LaTeX document. Here is an example:

# Your Presentation Title

Your Name

October 23, 2024

## Lorem Ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed non risus. Suspendisse lectus tortor, dignissim sit amet, adipiscing nec, ultricies sed, dolor. Cras elementum ultrices diam. Maecenas ligula massa, varius a, semper congue, euismod non, mi.

In this example, the first two pages of the PDF file located at `./sample.pdf` are included in the document.

## 9 Example of hyperref Package Usage

The `hyperref` package allows you to create hyperlinks within your document, as well as to external URLs. Here are some examples:

### 9.1 Internal Links

You can create internal links to sections, figures, tables, etc. For example, here is a link to the section on Code Example.

### 9.2 External Links

You can also create links to external websites. For example, here is a link to LaTeX Project.

### 9.3 Customizing Links

You can customize the appearance of links using the `hypersetup` command. For example:

With these settings, internal links will be blue, file links will be magenta, and URL links will be cyan.

### 9.4 Link to a Figure

Here is a link to Figure 1.

## 10 Example of graphicx Package Usage

The `graphicx` package allows you to include images in your document. Here is an example:



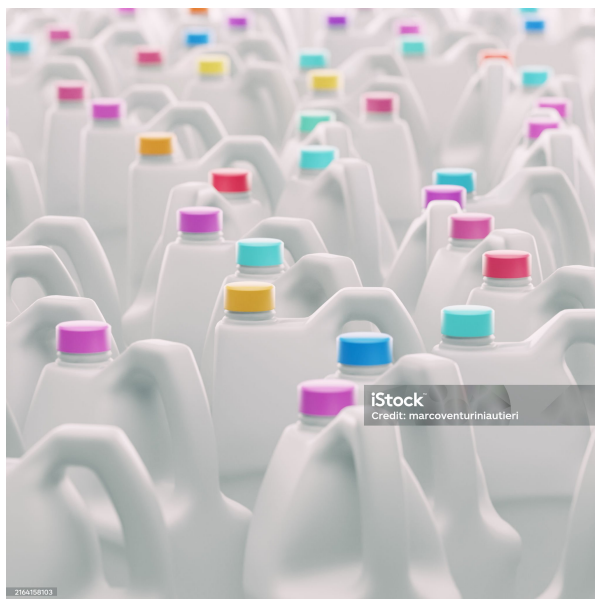


Figure 3: Example image

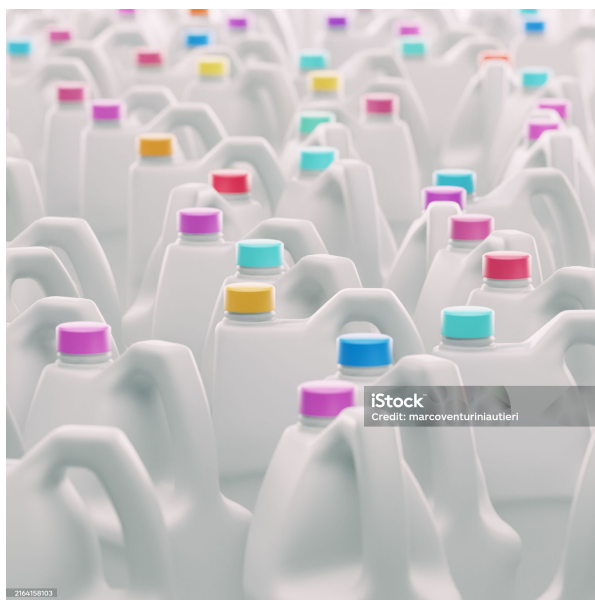


Figure 4: Example image included using the `graphicx` package