Digital Design and Computer Architecture

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Chapter 1

Template

1.1 tcolorbox

My Heading

This is a **tcolorbox**.

Here, you see the lower part of the box.

1.2 minted

```java
// Hello.java
import javax.swing.JApplet;
import java.awt.Graphics;

public class Hello extends JApplet {
    public void paintComponent(Graphics g) {
        g.drawString("Hello, world!", 65, 95);
    }
}
```

Chapter 2

Course Information

2.1 Description

The class provides a first introduction to the design of digital circuits and computer architecture. It covers technical foundations of how a computing platform is designed from the bottom up. It introduces various execution paradigms, hardware description languages, and principles in digital design and computer architecture. The focus is on fundamental techniques employed in the design of modern microprocessors and their hardware/software interface.

Objectives

This class provides a first approach to Computer Architecture. The students learn the design of digital circuits in order to:

- understand the basics
- understand the principles of design
- understand the precedents in computer architecture

Based on such understanding, the students are expected to:

- learn how a modern computer works underneath, from the bottom up
- evaluate tradeoffs of different designs and ideas
- implement a principled design (a simple microprocessor)
- learn to systematically debug increasingly complex systems
- hopefully be prepared to develop novel, out-of-the-box designs

The focus is on basics, principles, precedents, and how to use them to create/implement good designs.

Chapter 3

TITLE