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**School of Computer Science**

**Technical Workshop Series**

**The School of Computer Science Presents…**

**Design Patterns and How to Use Them**

**Presenter:**  **Tanmay Damle (Student Number: 110134656)**

**Date: Monday, November 4th, 2024**

**Time: 10:00 AM to 11:00 AM**

**Location: 4th Floor (Workshop space) at 300 Ouellette Avenue (School of Computer Science Advanced Computing Hub)**

**Abstract:**

In software engineering, a design pattern describes a relatively small, well-defined aspect (i.e. functionality) of a computer program in terms of how to write the code. Using a pattern is intended to leverage an existing concept rather than re-inventing it. This can decrease the time to develop software and increase the quality of the resulting program. Notably, a pattern does not consist of a software artifact. Most development resources that a programmer uses involve configuring the codebase to use an artifact, for example a library. In contrast, to use a pattern, a programmer writes code as described by the pattern. The result is unique every time even though the result may be recognizable as based on the pattern. Design patterns are typical solutions to common problems in software design. Each pattern is like a blueprint that you can customize to solve a particular design problem in your code.

**Workshop Outline:** Attendees will be shown the importance of Design Patterns, types of design patterns and some examples of where to use them.

**Prerequisites for attendees:** Just a good night’s sleep to understand the concepts.

**Resources:** [**https://github.com/damletanmay/lld\_and\_design\_patterns**](https://github.com/damletanmay/lld_and_design_patterns)

**Biography:**I have a Bachelor of Technology Degree in Computer Engineering from Charotar University (Anand, India) and am currently in the 3rd Semester in MAC program. I have worked as a Data Analyst Intern where I predominantly used Python, Power BI and SQL. I have dabbled in my interests which are Cyber Security, Game Development, Machine Learning, Web Development (Django, MERN), Application Development (Flutter), etc. I am very excited to share my knowledge on design patterns.