



## Model-Minded Programming: Some Techniques for Teaching Design Thinking

There are several popular approaches that offer guidance and set constraints on programmers, with the goal of creating good quality software designs.

- Domain-Driven Design (DDD) says we should be mindful of models of the problem domain, and we should embed the models in our code.
- Design Patterns say we should know a catalog of patterns so we can solve recurring problems that arise in object oriented code.
- Software Architecture says that unless we are mindful of large-scale patterns and models, our systems will not achieve the qualities we seek.
- Test-Driven Design (TDD) imposes a structure on our code so that it can be more easily tested.
- And functional, object-oriented, procedural, etc. are all programming styles that impose structure on our code.

The common denominator – software developers are expected to always keep in mind some abstract and complex models – models that constrain the code they write. In some ways these constraints are a burden, and in other ways they are light that illuminates a path forward.

This talk will discuss an idea tentatively called Model Minded Development that generalizes across DDD, Design Patterns, architecture, TDD, and coding styles. The defining characteristic of senior software developers is their facility with Model Minded Development – and the way that it enables them to create effective designs at an advanced level.

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Date: Thursday, March 19, 2015, 8:00 pm.  
(Refreshments and networking at 7:30 pm.)  
Place: Small Auditorium, Room CS 105  
Computer Science Building, Princeton University  
Information: Dennis Mancl (908) 582-7086  
On-line info: <http://PrincetonACM.acm.org>

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday's Restaurant on Route 1. Please send email to [princetonacm@acm.org](mailto:princetonacm@acm.org) in advance if you plan to attend the dinner.

