




Session 1: **Getting Started With Rails**

IRIS, NITK



About the Bootcamp

- *IRIS* is a team of motivated students working to digitize administrative, academic and alumni-related activities.
- The *Ruby on Rails Bootcamp* is an opportunity for us to interact with the next generation and help them make NITK a better place.
- We are *students just like you*, not professionals :)



My Philosophy

- Programming is equal parts engineering and art.
- Programming is (mostly) self-taught.
- Learning small, specific concepts at a time is effective.
- Feedback accelerates growth.

Caution: I take myself too seriously ͇_(ツ)_/͇



Some Web Terms (Oversimplified)

- A *Webpage* is a HTML document that can be viewed by browser.
- A *Website* is a collection of webpages.
- A *Web Application* processes client requests and responds with web pages.
- A *Web Framework* solves common web development problems like data management, session management and building attractive UI.

What is MVC?



Divides program logic into three interconnected elements:

- *Model*: stores and processes data.
- *Controller*: decides the flow of process.
- *View*: presents data to user.

Let's take a closer look with examples.



Example: Exam Grades

How to store and process data? (*Model*)

- Spreadsheets
- Databases
- Cloud Storage

How to decide which view to show? (*Controller*)

How to present data? (*View*)

Student's view: marks, grades of *all my courses*

Faculty's view: marks, grades of all students and a statistical breakdown of a particular course

Academic Section's view: grades of all students arranged by semester



Example: IRIS Forms

How to store and process data? (*Model*)

- Spreadsheets
- Databases
- Cloud Storage

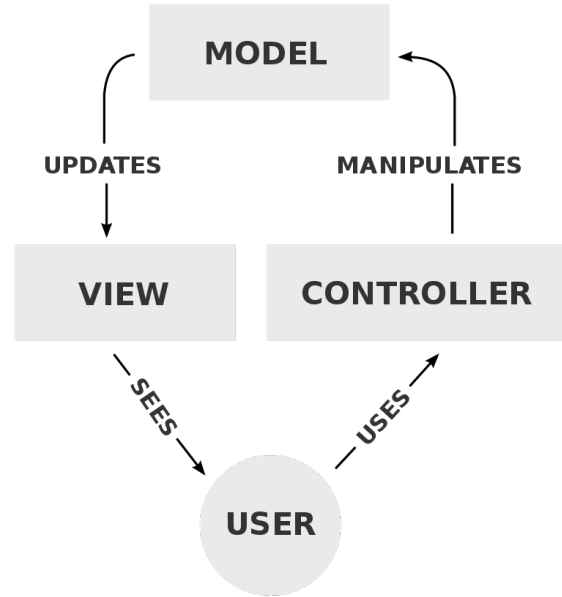
How to present data? (*View*)

Form Creator's view: show individual and summary of responses, ability to edit form.

Form Filler' view: ability to fill, edit and delete form response.

How to decide which view to show? (*Controller*)

How MVC Works





Why Bother with MVC?

- Clean, maintainable code
- Loose coupling of the components
- Logical separation of concerns

It's alright if you don't appreciate MVC right now - experience with building applications required :)

What is Ruby on Rails?

- Ruby is a loosely-typed, interpreted language.
- Ruby “optimizes” for programmer happiness with clean, elegant syntax.
- Rails is a MVC web framework built on top of Ruby.
- Models and Controllers are written in Ruby whereas Views are written in HTML, JS and other formats.

That's all of theory - let's build a Website!



Building a “About Me” Website on Rails

Prerequisites:

- Install Ubuntu (on VM or dual boot)
- Install Git
- Install RVM, Ruby and Rails
- Clone the RoR bootcamp repository

When you download Kali Linux and follow a YouTube tutorial to guess your 4 character password.

