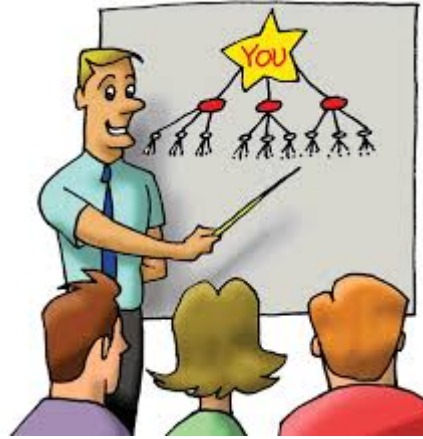


# Challenges and Opportunities in Moodle adoption in Engineering Education

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**Moodle Moot Mumbai**  
**18-19 Dec 2017**



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## Who am I ...

### Professionally:

Teacher

### Voluntarily:

Programmer

Moodle Administrator

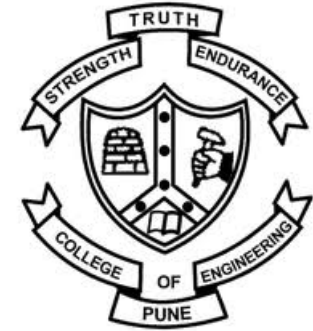
Moodle Teacher

(small time) Moodle contributor

Moodle advisor



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## The Moodle scenario at my college (COEP) and other places

**Usage constantly growing**

**Inhibitions of faculty**

**Students' demand is big**

**Lack of Moodle trainers**

**Opportunity**

**One major requirement in all colleges**

**Management Information System (MIS)**

**Why not based on Moodle?**

**Commercial solutions exist, GPL solution needed**

# Need: Moodle + MIS

## **Institute wise**

Create programs, configure and customize them

## **Program wise**

Students registration

Tracking of program completion

## **Semester wise**

Course enrollment (by students) + approval (by advisors)

Grading mechanism

Aggregate grade sheet preparation, customizable

Attendance system

# Moodle in curriculum

## **The FOSS elective at COEP (Year 2016)**

Undergraduate program

**Moodle development process as an important case study**

**Course tasks based on fixing bugs in Moodle**

# FOSS Development Course

## Using Moodle as a case study

### **Moodle development process**

important case study in FOSS Development processes

An excellent example of Agile + Sprint in practice

### **Moodle code**

As a case study of : state of the art industrial strength code developed using collaborative development

Students asked to study code

Students asked to participate in the Moodle development process

# Moodle bugs worked on:

## A snapshot from COEP's course wiki page(2 Yr Old)

### Moodle bugs being worked on

Pairs of students worked on bugs in Moodle.

Serial No.	Bug No.	Bug Description	Participants	Status
1	MDL-53004	No space between HTML divs	Anurag Bhikane, Sagar Gomsale	Open
2	MDL-53151	Undefined variable: e in course/modlib.php on line 132	Abhishek Notani, Ajinkya Panaskar	Open
3	MDL-52483	Help text for Password-change URL in auth plugins settings incorrectly says it will generate button on login page	Abhishek Notani, Ajinkya Panaskar	Open
4	MDL-53823	Expression always true	Sushant Chavan, Shrikrushna Kulkarni	Patch sent
5	MDL-53603	Quiz with shuffled questions: manual grading pop-up shows the question number students saw during the attempt	Abhilash Mhaisne	Patch sent
6	MDL-52092	Log username instead of fullname() in the 'other' property of user_loggedinas event	Sanket Mehrotra	Patch submitted



# Moodle in FOSS course: the teacher's commit

```
commit 1b276bfc9d0c9a62233f09450a7ae2e3ed08d3f5
```

```
Author: Abhijit A.M <abhijit13@gmail.com>
```

```
Date: Wed Apr 6 16:04:13 2016 +0530
```

```
MDL-53440 course: Better interface for approving multiple courses
```

```
Added another target 'pending' in course/edit.php for redirection  
This will help administrator/managers approve multiple courses  
one after another
```

# Moodle in curriculum: questions in exam

**Draw a neat diagram explaining the bug resolution process in the Moodle community.**

**Describe in one line each, the functionality provided by following functions in Moodle code.**

`require_login()`

`optional_param()`

`$DB->get_field()`

`html_writer::start_tag()`

**Write the class hierarchy of any 5 classes used in the output API in Moodle code.**

## Challenges

### Moodle in curriculum: Lessons learnt

**Steep learning curve for students as a course project**

**Proper choice of issues for newbies is a challenge**

**Matching course deadlines with Moodle development frame is a challenge**

## Opportunities

### Moodle in curriculum: Lessons learnt

**Engage with Moodle communities around to enable faster development and mentor support**

# Overall

**Students enjoyed and learnt**

**A great product to work on and introduce FOSS principles!**

**Coming up:  
Web Systems and Technologies course**

**With assignments based on Moodle**



Vs



## FOSS in curriculum: Moodle Vs others

**Wordpress, Drupal communities are strong and proactive to engage with academic institutes**

**Oppportunity: Need for a *local moodle community and businesses willing to engage with academic institutes.***

## Takeaway

**Moodle as an excellent tool of learning, teaching FOSS processes in curriculum**

**Need for a GPL licensed MIS system based on Moodle**

**Need for local Moodle community and business involvement with academic institutes**