Aakash for School Education

Summer Internship - 2014

IIT Bombay

Under the Guidance of
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5th July 2014

‘Virtualis’

Labs on the fly

Virtual Laboratory

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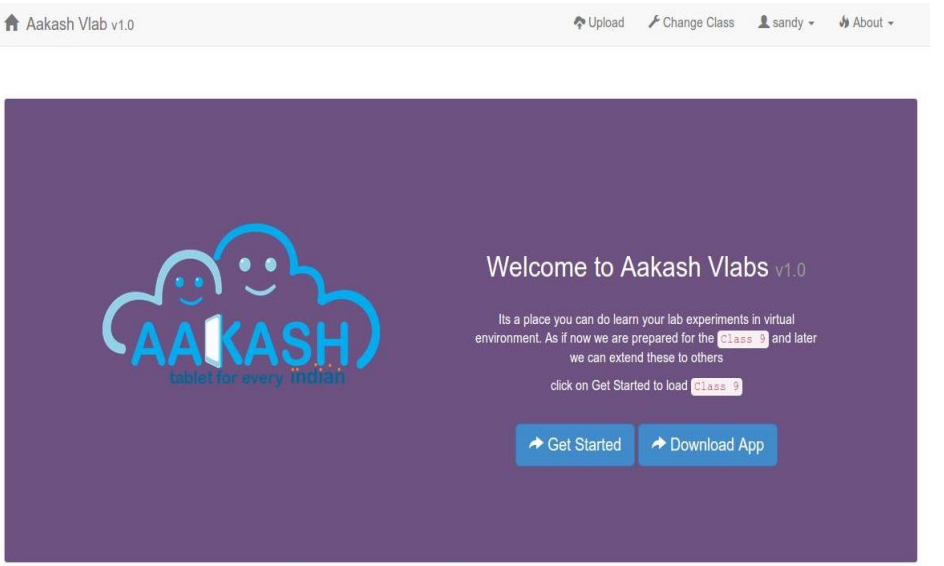
Objectives

- Web Portal
- Synced Android App
- Lab Experiments
- Evaluative Quiz
- Guided Simulations

Home Screens

Android Interface



Web Interface

Technical Challenges Faced

Challenges:

- Simulation
- Sync between Web and Android
- Quiz Module
- Content Management

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What We Learnt?

- Team Work
- New Technologies
- LaTex, Git, Canvas, Android

Future Enhancement

- Language localization
- More functions in simulation
- GUI for adding quizzes
- Contributor Module in Android app
- Student profiles

Project – 2

Learn . Quiz . Assess

A Group & Peer based Quizzing System

Objectives

- Peer Quizzing
- Enhance learning process
- Quality questions
- Performance evaluation & analysis

Working – G&P Quizzing System

Wi-fi Access Point

Database

Teacher (Server)

Leader

Group Members

Group Members

Group 1

Leader

Group Members

Group Members

Group 2

Technical Challenges Faced

Challenges:

- Make UDP reliable.
- Leader goes out of the network - system halts.

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What we learnt:

- Android and network programming.
- Modifying an existing transmission protocol to serve our requirement.
- Working in groups and teamwork.

Future Enhancement

- Intra group communication.
- Better data visualization, analysis.
- Peer-to-peer assignment evaluation.

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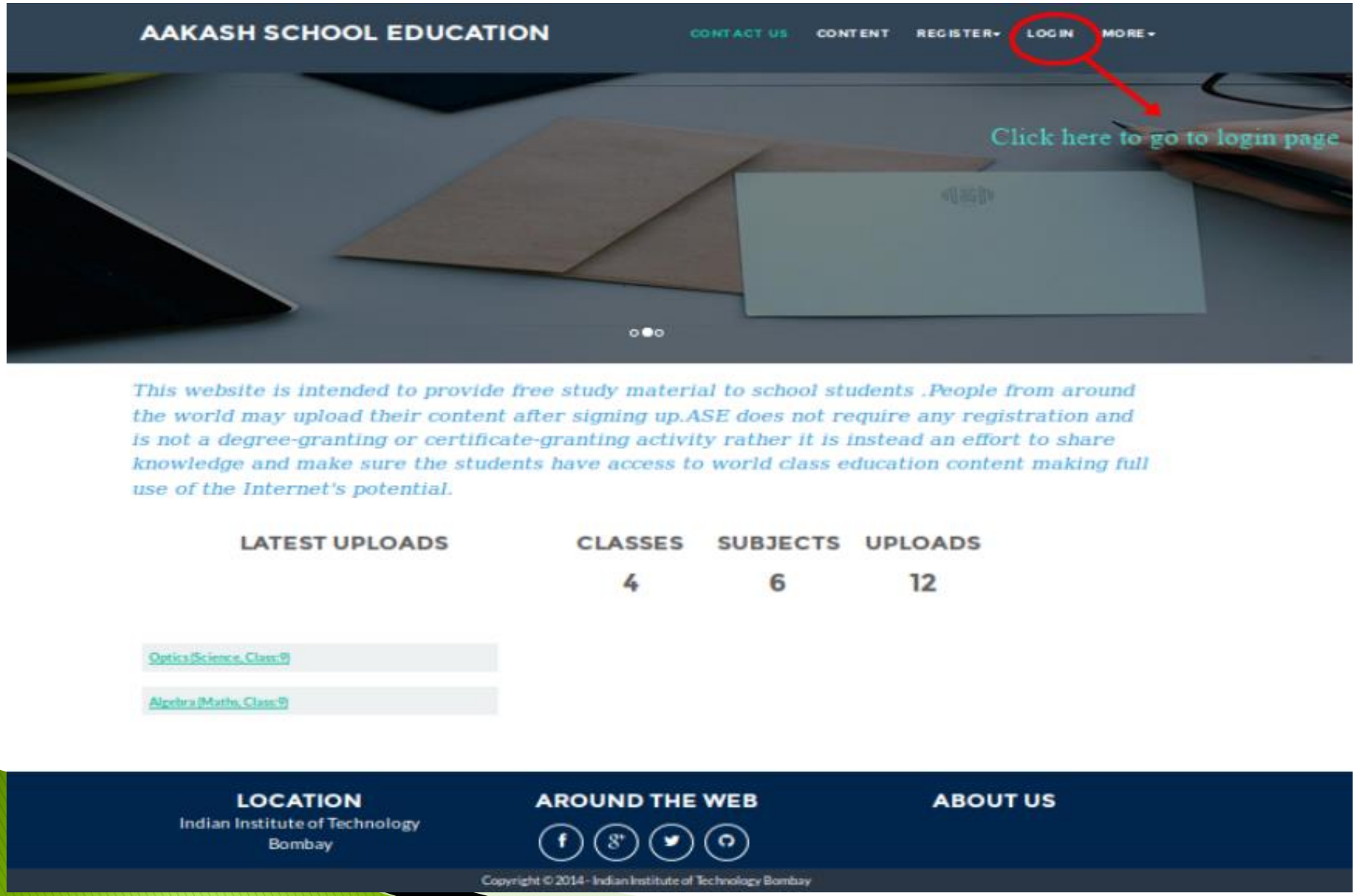
Content Contribution Portal For School Education

Objectives

- Aakash Web portal is a free content providing website.
- To bridge the distance between world class education and under privileged students who face difficulty in accessing quality education.

Home Page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Technical Challenges Faced

Challenges:

- Choosing the appropriate Web-framework. It was a tough decision since there were so many available.
- Scarce knowledge about Python and Django.

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Technical Learning:

- Python programming
- Django framework
- Git
- Html
- CSS
- JavaScript
- UML diagrams

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Non - Technical Learning:

- Teamwork
- Patience
- Time management

Future Enhancement

- Interface of the website content can be displayed in different languages.
- Facility for quiz and comprehensive tests for students can be implemented to help a student check his/her understanding level.

Thank You