In the pursuit
of
(prospective) project

[Problem Based Learning ✉ Software Engineering]

[Content Guru]
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...ty. All staff members and students are involved in some or other initiative directly or indirectly.
...vered are not the sole list of activities.

Background

To bolster both **FACULTIES**' and **STUDENTS**' voyage **"In the pursuit of (prospective) project"**, Department of Computer Engineering, FoT. DDU. has following insight:

Let us make both stack holders ready for (prospective) project,
From the Sources of Projects:

* Industry collaboration
* Teachers' research work
* Institute's software requirement

Problem solving based learning (PBL)

With the approach of "Problem solving based learning-PBL"

* Step 1 : Identify projects for which required technical competency aligns with curriculum.
* Step 2 : Decide duration of project & various subject heads under which it can be offered.
* Step 3 : Create the team
* Step 4 : Task planning as per the students' academic needs.
* Step 5 : Distribute tasks and decide milestones
* Step 6 : Monitor the progress and provide necessary support.

Justification

Innovative Practices/Approach/Steps:

1. Identify Projects 2. Duration and Subjects 3. Create Team

Evidences: Steps 1-2-3

* Gimbal Research Project : Industry collaboration
  * Technically challenging task of one year. Requires knowledge of hardware, micro controllers
    * Good learning opportunity for students learning or interested in micro controller
* Semantic Information Retrieval : Faculty research
  * Suitable for final year full time project. Requires knowledge of search engines, information retrieval theory, JAVA programming
    * Given the tasks. Learn and apply. Group as per skillset and interest.
* Employee leave management System : Department software application
  * Mid-term efforts. Requires knowledge of Software Engineering and Web Application Development
    * 2-3 students of pre-final year with required skills.

Step 4, 5 : Task Planning & milestone

To grow technical competency, CE Department has integrated Projects at various Courses Level as below:

* From first year, graduate students to work on/extend mini project(s) under departmental subjects
* Pre final year graduate students carry out tasks
  * Amalgamated project pre-work (BTech V - DBS for database design and SE for System Design)
  * Under subject head 'System Development Practices' and 'Summer Internship'
* Final year graduate students perform tasks as full time project/internship in last semester
* Post graduate students perform survey and research as part of 'Thesis/Dissertation'

Step 6 : Progress monitoring & support

Role of the teacher:

Teacher does not perform traditional role of teaching the technical content. Teacher rather acts as a mentor which provides necessary knowledge and guidance.

* Let students make hand dirty and learn lessons hard way.
* Once students face challenges provides necessary technical support to overcome it.
* Let student brain storm and find solution.
* Provide knowledge incrementally, talk about task -2 (usually more difficult) once the task-1 is finished.

Faculties in Action

Faculties' Exemplary Live Development (Ongoing and Past)

* Industry collaboration
  * Gimbal Research Project
  * Snort Application Identification
* Faculty research
  * Semantic Information Retrieval
* Institute Software
  * E-Governance Student and University Portal
    * Includes customized moodle – Online Learning Resource
* Department software
  * CE Faculty Portal
    * Subject Preference
    * Leave Management
    * Document Archive
    * Library Management (local)

Few Captures

Institute Software

Department Software
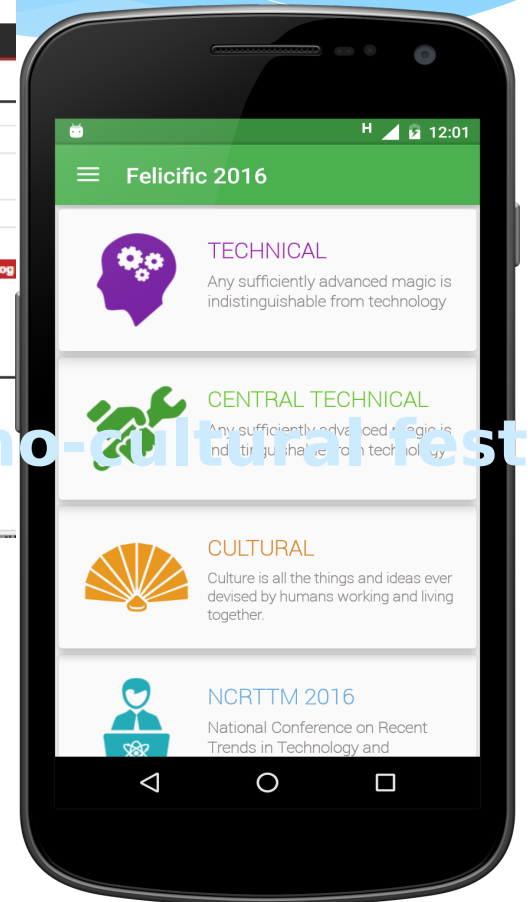
Industry Collaboration
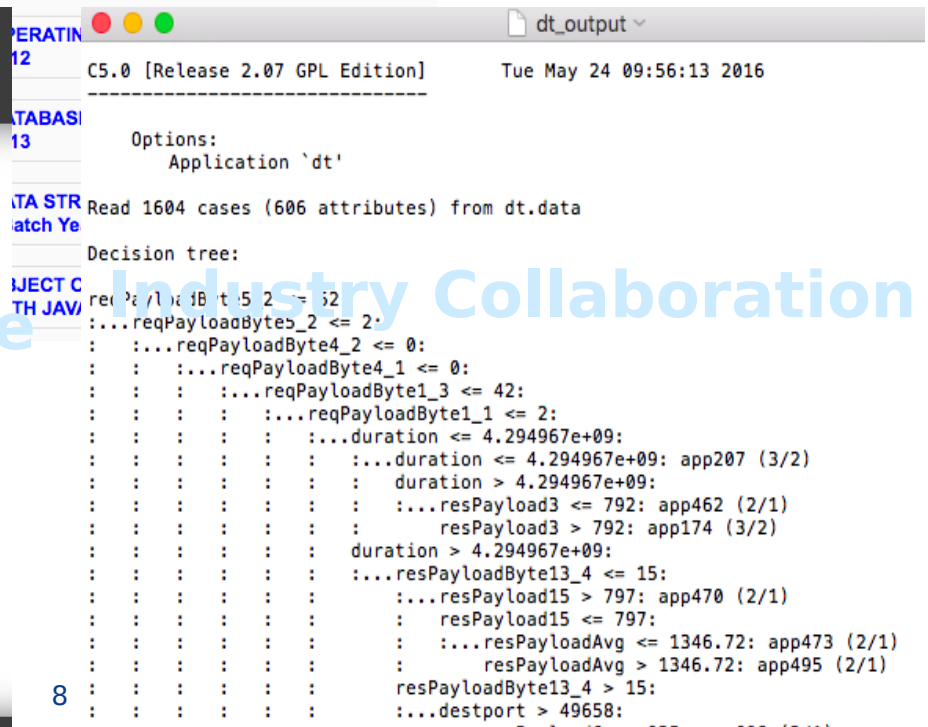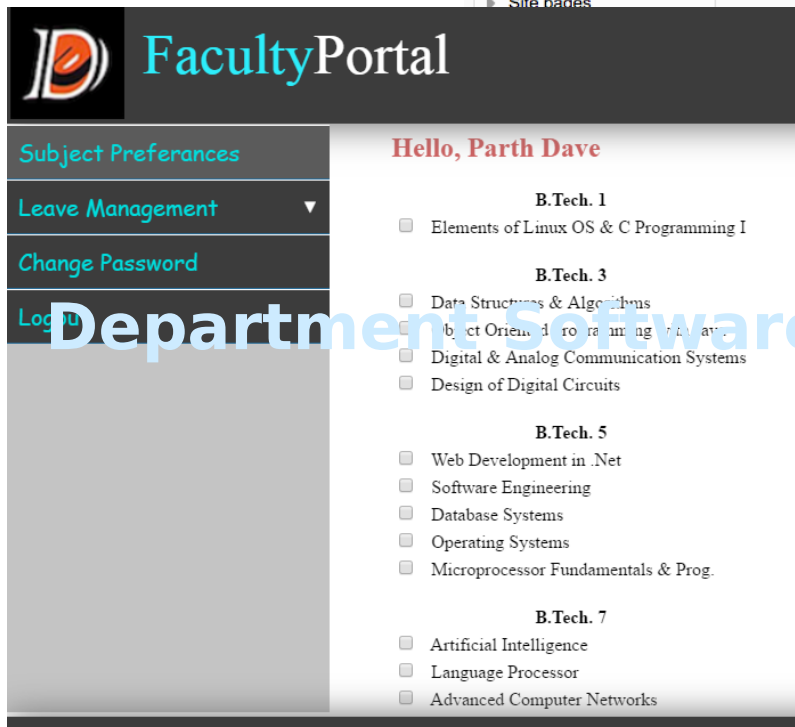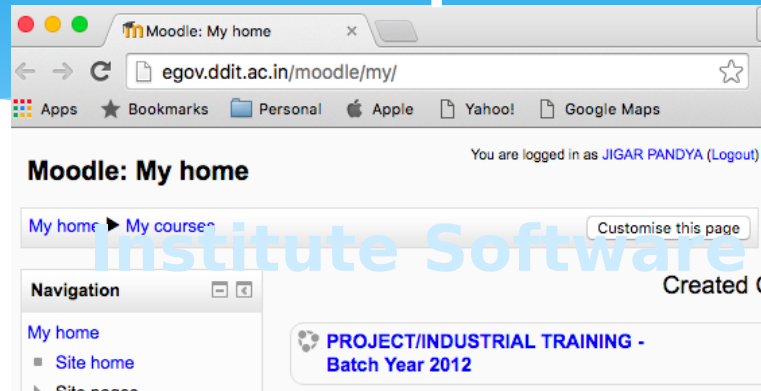
Students in Action

Students' Exemplary Live Development (Ongoing and Past)

* Web and mobile based information sharing for Felicific, the annual Techno-cultural festival
* Mobile App for viewing results and more
* Web based University Newsletter (University level)
* Web based Faculty feedback by students, an ISO mandate
* National level eYantra robot design and software development project competition winner for three consecutive years 2012, 2013, 2014 at IIT Bombay

Few Captures

News Letter

Results on the Go

Techno-cultural festival

About

A+

DDIT Results
(v2.0)

Created By :

Prabhakar Niraula (CE)

Tanmay Naik (CE)

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16th CONVOCATION

16th Convocation Ceremony (9th May 2016)

On 9th May 2016, DDU witnessed its 16th Convocation ceremony where 1453 students graduated with vari...

Straight from the Researcher

13 days ago   0   56 Views

Prof. Dhiraj Bora Prof. Dhiraj Bora is the Director of the Institute for Plasma Research (IPR), Gandhinagar. Prior to this appointment, Dr. Bora was a Deputy Director General and Director at ITER International Organization, Cadarache, France. After completing his Masters ...

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GALLERY

Felicific 2016

TECHNICAL
Any sufficiently advanced magic is indistinguishable from technology

CENTRAL TECHNICAL
Any sufficiently advanced magic is indistinguishable from technology

CULTURAL
Culture is all the things and ideas ever devised by humans working and living together.

NCRTTM 2016
National Conference on Recent Trends in Technology and

Software Engineering Contents

The CONTENT in itself bolsters the initiatives year by year

* Documentation
    * Project Report with Analysis, Design, Implementation, Testing and more.
* Demonstration (BTech_VI_SystemDePractices)
    * Telling a story of application usage with finger tips
* Presentation (BTech_VIII_IndustrialTraining)
    * Technologies and crucial logic behind the scene
* Distribution
    * Packaging and sharing i.e. github, playstore, etc.

Document

Worksheet

Microsoft Excel Worksheet

Document

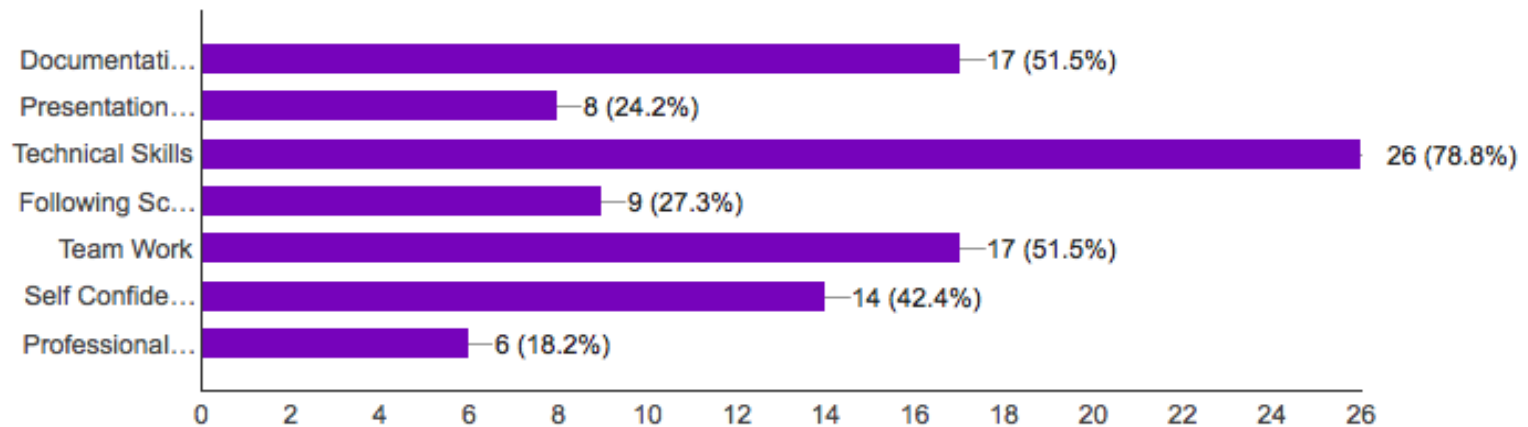# Software Engineering Contents

Index

Feedback

Students and faculties participation in project development (Individual/Team) imparts industry readiness for the (prospective) project.
(33 responses)

Agree.
21 (63.6%)

6%

27.3%

- Strongly Agree.
- Agree.
- Neutral.
- Do not agree.
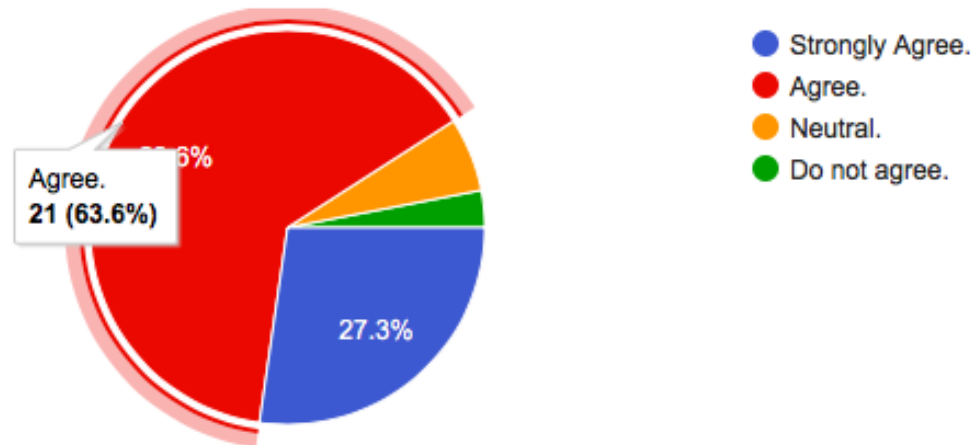
Feedback

Best three points for which improvement have been noticed. (Student-self improvement)
(33 responses)

Category	Value
Documentati...	17 (51.5%)
Presentation...	8 (24.2%)
Technical Skills	26 (78.8%)
Following Sc...	9 (27.3%)
Team Work	17 (51.5%)
Self Confide...	14 (42.4%)
Professional...	6 (18.2%)

These initiatives, prepare students and faculties for (prospective) projects especially better with **documentation**, **technical** and **team work** skills.

Appreciation**

* Faculty is very supportive. All the things which I learnt during this entire period, I was able to apply that practically via SDP.[Current Student]
* The practical knowledge imparted to students is far better than other colleges [Former student/Industrialist]
* Teaching is already nice, can be improved by visualizing boring theories this way. [Former student/Industrialist]

Conclusion

With the attentive PBL steps as mentioned, we see the positive difference in
* Students' and Faculties' project/industry readiness
* Effectiveness attained with
  * Documentation Skills
  * Presentation Skills
  * Technical Skills
  * Following schedule/Time management
  * Team work, Self confidence, Professional Circle Development skills
* Overall, Software Engineering turned interesting and challenging
  * Students learnt importance of each stage the hard way
  * Students' resume and interview appearance have better impact of product they built

Thus, at Computer Engineering Department, FoT, D.D.University, Nadiad, we just do not teach Software Engineering but we actually work to impart Software Engineering.

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www.ddu.ac.in

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