

Course Helper

CS654A Project

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Introduction

Objectives

Logical View of the Architecture

Platform and Technologies

Work Flow

- Course Search

- Personal Template

Course Related Attributes

Future Work

Introduction

Through this project we intend to help students of IIT Kanpur in choosing the right courses during their registration in order to optimally complete their degrees as well as make the most of their stay in the college by opting for the right courses at the right time.

Objectives

- ▶ Enlisting remaining credits

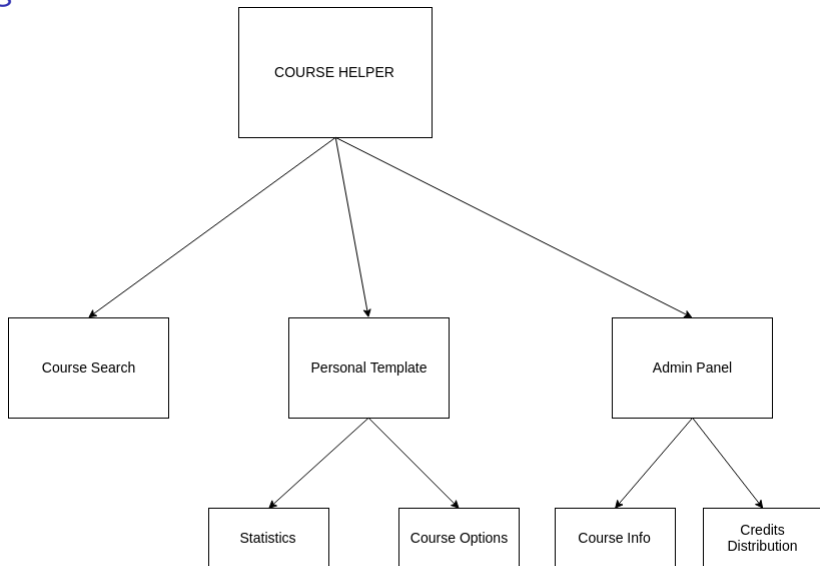
Objectives

- ▶ Enlisting remaining credits
- ▶ Enlisting possible course options to fulfill the credits requirement

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- ▶ Enlisting remaining credits
- ▶ Enlisting possible course options to fulfill the credits requirement
- ▶ Adding search filters on course lists

Logical View



Logical View

This solution will have 2 end users: (1) Students and (2) Administrator. Here is the description of the modules:

Course Search: Accessible to the student user, next semester course list with search filters

Personal Template: Accessible to the student user, will contain information about the remaining credits that have to be done by the student to complete his/her program.

Admin Panel: Accessible to the admin, to assign credit distribution and semester wise template for all departments.

Platform and Technologies

User end: An android application, with the help of the following 3rd party libraries:

Volley: For sending HTTP requests

JSoup: For parsing HTML responses in Java

Picasso: For displaying user's profile picture

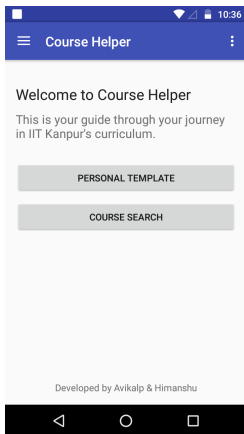
Server: Built on *Django* framework, hosted on EC2 instance of *AWS cloud server* along with help from the following libraries:

BeautifulSoup: For parsing HTML responses in Python

Data: **User data:** Read from OARS

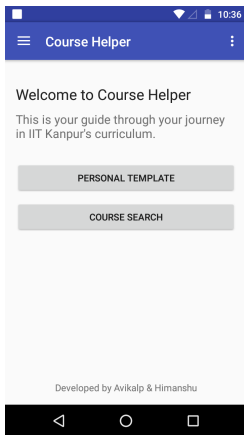
Course & Degree info: Managed using admin panel

Glimpses of the android app

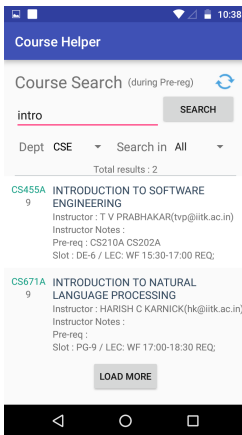


(a) Landing page

Glimpses of the android app

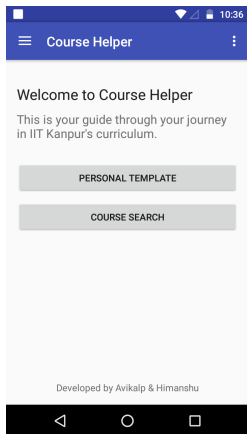


(c) Landing page



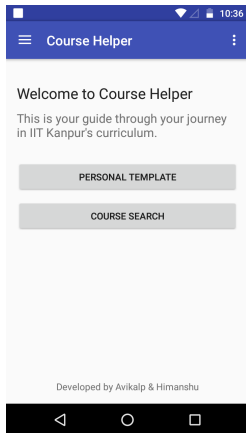
(d) Course Search

Glimpses of the android app

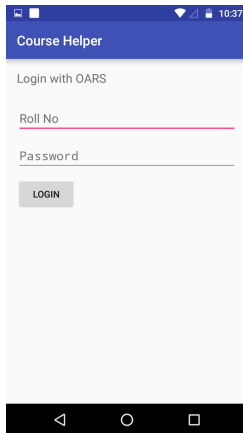


(e) Landing Page

Glimpses of the android app

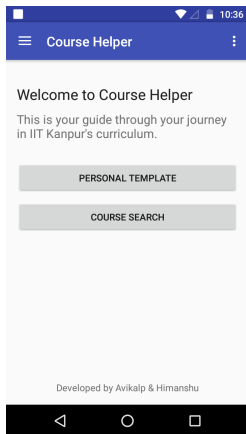


(h) Landing Page

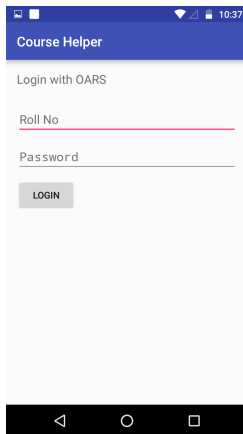


(i) Login

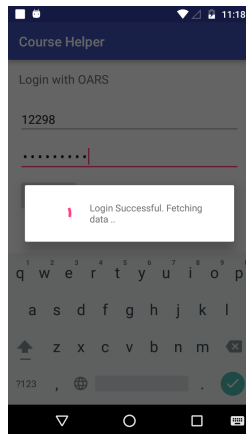
Glimpses of the android app



(k) Landing Page



(l) Login



(m) Loading

Glimpses of the android app

PersonalTemplate

STATISTICS COURSE OPTIONS

Your department's core template

Course Type	Min Required	Completed
Compulsory	230	199
Department Elective	36	27
Open Elective	54	36
SO/ESO	40	41
HSS-I	22	22
HSS-II	27	9
UGP-I	0	0
UGP-II	0	0
Total	409	334

Remaining Credits

Compulsory	31
Department Elective	9
Open Elective	18
HSS-II	18

(n) Raw statistics

PersonalTemplate

STATISTICS COURSE OPTIONS

Remaining Credits

Compulsory	31
Department Elective	9
Open Elective	18
HSS-II	18
Total	76

Courses done by you

Compulsory

LIF101A	INTRODUCTION TO BIOLOGY	6 D
MTH101A	MATHEMATICS I	11 B
PE101A	MORNING EXERCISE	3 S
PHY101A	PHYSICS LABORATORY	3 B
PHY102A	PHYSICS-I	11 D
TA101A	ENGINEERING GRAPHICS	9 B
CHM101A	CHEMISTRY LABORATORY	3 B
CHM102A	GENERAL CHEMISTRY	8 C
ESC101A	FUNDAMENTAL OF COMPUTING	14 B

(o) Remaining credits

PersonalTemplate

STATISTICS COURSE OPTIONS

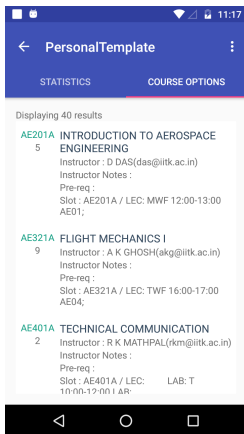
Courses done by you

Compulsory

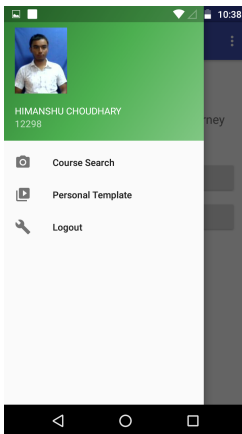
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MTH101A	MATHEMATICS I	11 B
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TA101A	ENGINEERING GRAPHICS	9 B
CHM101A	CHEMISTRY LABORATORY	3 B
CHM102A	GENERAL CHEMISTRY	8 C
ESC101A	FUNDAMENTAL OF COMPUTING	14 B
MTH102A	MATHEMATICS - II	11 C
PE102A	EVENING EXERCISE	3 S
PHY103A	PHYSICS-II	11 C
COM200	COMMUNICATION SKILLS: COMPOSITION	5 S
PHY224A	OPTICS	12 C
TA202A	MANUFACTURING PROCESSES II	6 C

(p) Completed courses

Glimpses of the android app



(q) Course Options



(r) Logout

Salient Features

Server

- ▶ REST Architecture
- ▶ Shares OARS server load

Android App

- ▶ Low Network Traffic
- ▶ Works Offline (once data is downloaded)
- ▶ Privacy (user data stored locally)

Future Work

- ▶ Course Recommendation

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- ▶ Including "What-if" scenarios

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- ▶ Including "What-if" scenarios
- ▶ Course Reviews
- ▶ Integration with OARS

Questions

