



SDP PROJECT REPORT FOR WEB DEVELOPMENT WITH DJANGO

**PROJECT NAME: Reva University
website**

Done by: Team A – Dimple K

SRN: R19CS465

WHAT IS DJANGO AND WHAT ARE ITS ADVANTAGES?

Django is an open-source python web framework used for rapid development, pragmatic, maintainable, clean design, and secure websites. A web application framework is a toolkit of all components needed for application development. The main goal of the Django framework is to allow developers to focus on components of the application that are new instead of spending time on already developed components. Django is fully featured than many other frameworks on the market. It takes care of a lot of hassles involved in web development; enables users to focus on developing components needed for their application.

ADVANTAGES:

- ☐ It is easy to use and implement and programmers benefit from it since it saves a lot of development time
- ☐ Django also supports asynchronous views.py function calls, so responsive web apps and mobile backends are well supported.
- ☐ Django allows programmers to create large and extensive web applications and REST APIs with the least amount of effort
- ☐ Django provides the programmer with 2 excellent classes to handle HTTP(S) protocol – HttpRequest and HttpResponse. The views.py functions take an HttpRequest object as a parameter to the function and it returns an instance of the HttpResponse class. The APIs provided by these above mentioned classes are so well designed that one can manipulate every aspect of the request and response objects.
- ☐ Modification of one component doesn't affect any other component.

WHY WE CHOSE REVA UNIVERSITY WEBSITE AS OUR PROJECT TOPIC?

In the five days of sdp conducted for web development using django framework we learnt that there are three parts to web development, frontend, middleware and backend.

In order to integrate these concepts into one common idea within the given amount of time we decided that creating a university website would be the best option.

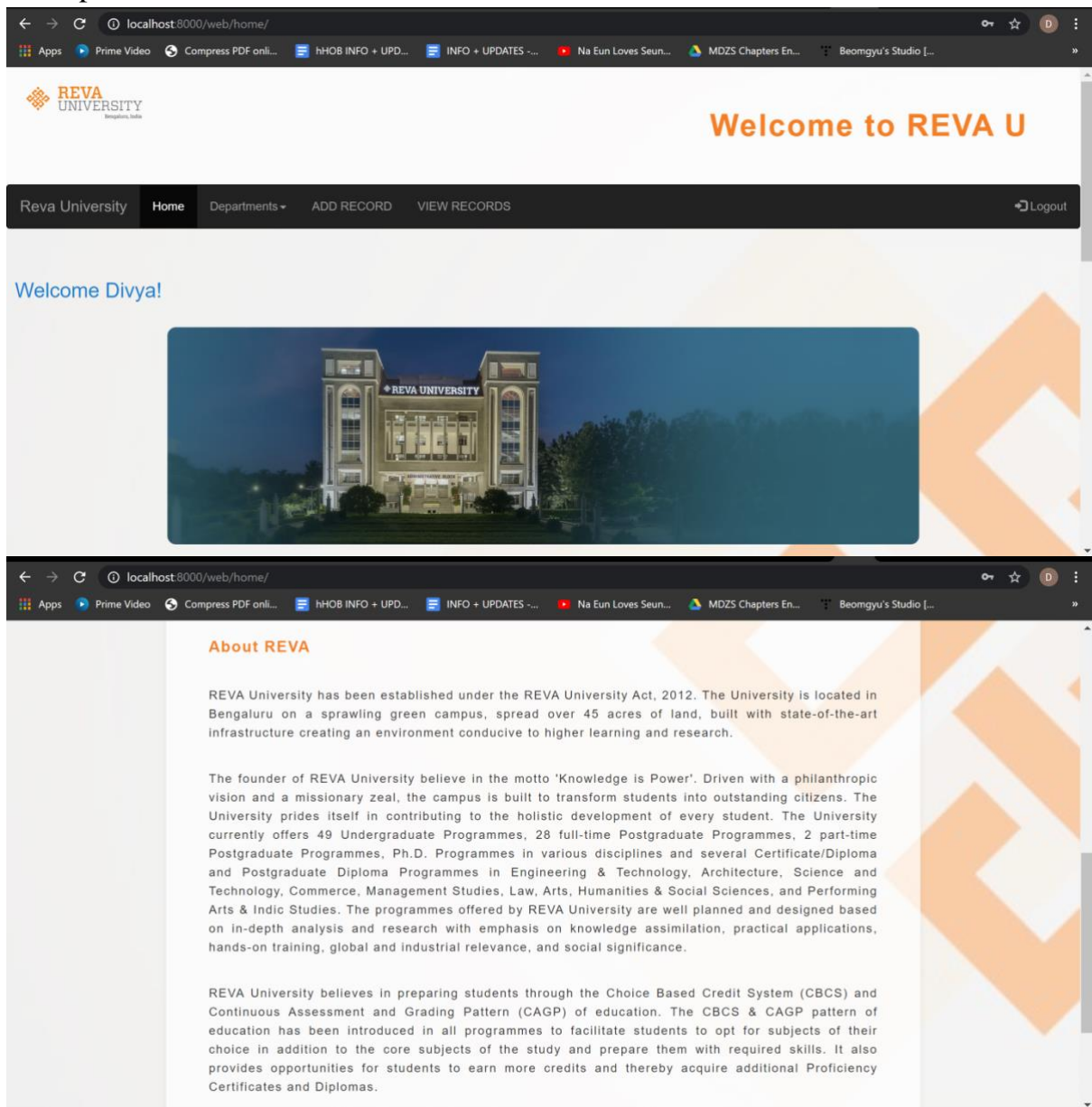
HOW WE PLANNED AND EXECUTED OUR PROJECT.

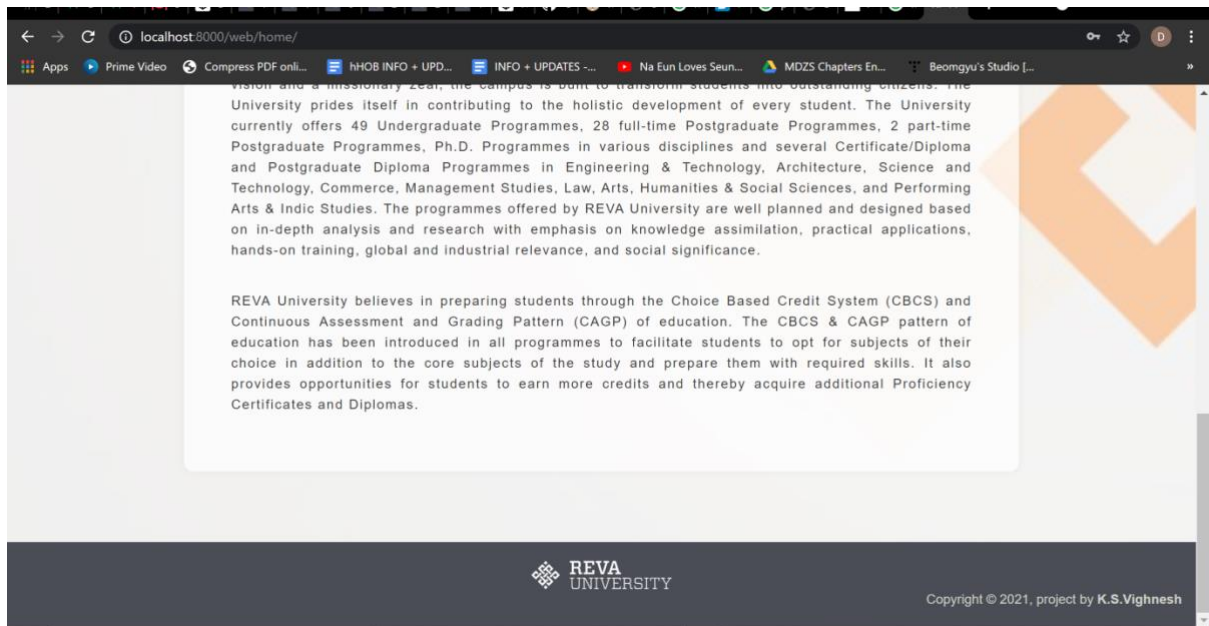
First we decided to make the login page which would have the option to either register or login directly if you are an existing user. The screenshots are shown below.

The screenshot shows a web browser at localhost:8000/web/. The page features the University of Bengaluru logo and a 'Create Account' form. The form has four input fields: a text field containing 'r19cs466', a password field with masked characters '*****', a text field containing 'Divya', and another text field containing 'Shenoy'. Below these fields is an orange 'SUBMIT' button. Underneath the button, the text 'Existing user?' is displayed, followed by a rounded 'LOGIN' button.

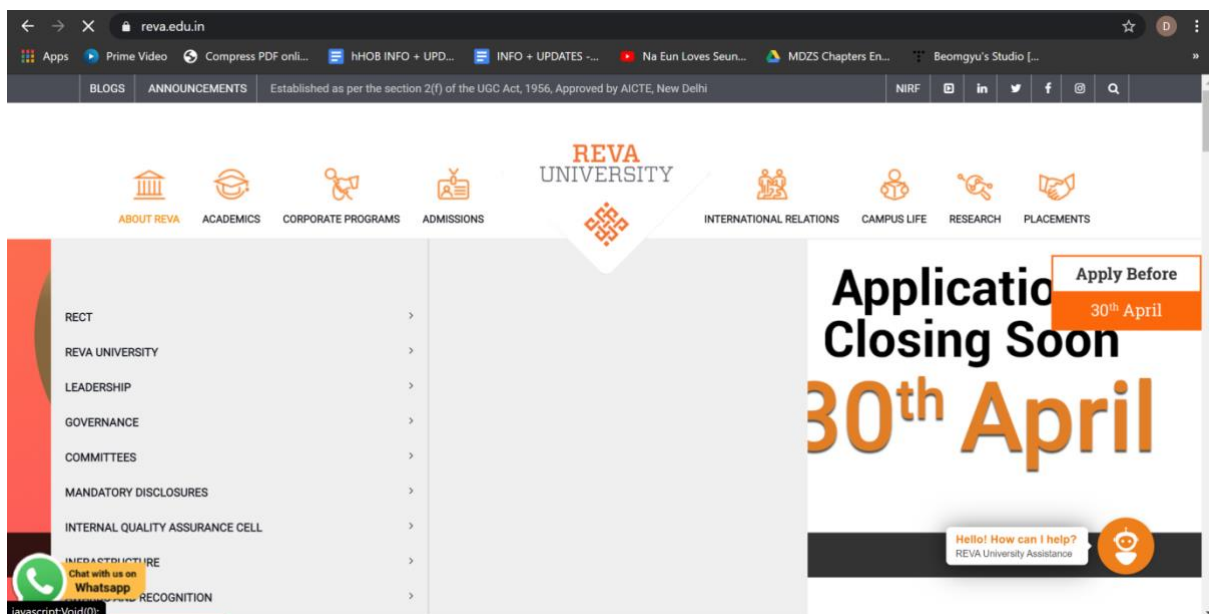
The screenshot shows a web browser at localhost:8000/web/login/. The page features the University of Bengaluru logo and a 'Log In' form. The form has two input fields: a text field containing 'r19cs466' and a password field with masked characters '*****'. Below these fields is an orange 'LOGIN' button. Underneath the button, the text 'New user?' is displayed, followed by a rounded 'SIGNUP' button.

We then moved on to our home page designed that had all the necessary information needed such as the link to the official Reva University website, Departments of Reva and the add record and view record option to demonstrate the working of backend concept.

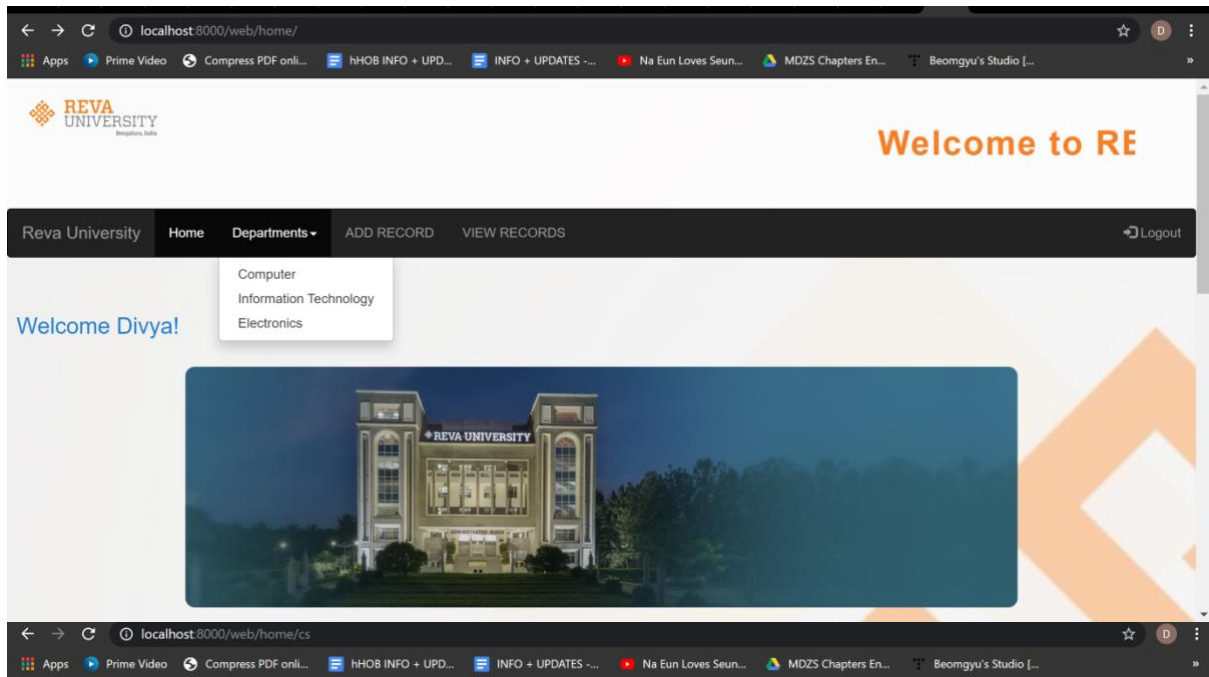




Below are the screenshots of the link to the official reva university website.



Under the departments of reva we have included three, the computer, information technology and the electronics departments. The screenshots are as follows.



Department of Computer Science

DATABASE

Total Number of students : 600

S.No	Name	Phone Number	Semester	ID
1	Mahesh M	9968357854	3	R19CS122
2	A Rajesh	8768352854	2	R20CS102
3	D Varshit	8162257844	5	R18CS153
4	Kartik K	9268357878	3	R19CS172
5	Rishabh R	8968352856	2	R20CS307
6	Hritik G	77962257834	5	R18CS367
7	Chetan S	8468357801	3	R19CS387

Department of Information Science

DATABASE

Total Number of students : 200

S.No	Name	Phone Number	Semester	ID
1	Mahesh M	9968357854	3	R19CS122
2	A Rajesh	8768352854	2	R20CS102
3	D Varshit	8162257844	5	R18CS153
4	Kartik K	9268357878	3	R19CS172
5	Rishabh R	8968352856	2	R20CS307
6	Hritik G	77962257834	5	R18CS367
7	Chetan S	9468357891	3	R19CS382

Department of Electronics and Communications

DATABASE

Total Number of students : 400

S.No	Name	Phone Number	Semester	ID
1	Mahesh M	9968357854	3	R19CS122
2	A Rajesh	8768352854	2	R20CS102
3	D Varshit	8162257844	5	R18CS153
4	Kartik K	9268357878	3	R19CS172
5	Rishabh R	8968352856	2	R20CS307
6	Hritik G	77962257834	5	R18CS367
7	Chetan S	9468357891	3	R19CS382

The add record option takes us to as shown below.

The screenshot shows a web browser at localhost:8000/web/home/create. The page has a navigation bar with 'Reva University', 'Home', 'Departments', 'ADD RECORD', and 'VIEW RECORDS'. Below the navigation bar, there are radio buttons for 'MALE' (selected) and 'FEMALE'. The form contains four input fields: 'Student Name' with the value 'lokayukta', 'Student Email' with 'l@gmail.com', 'Student Address' with 'bangalore', and 'Student Mobile' with '1234567890'. A yellow 'INSERT RECORD' button is at the bottom.

MALE FEMALE

Student Name : lokayukta

Student Email : l@gmail.com

Student Address : bangalore

Student Mobile : 1234567890

INSERT RECORD

Here we demonstrate the working of the backend. The insert record button adds the information to the database. This is the screenshots of the database.

The screenshot shows the Django administration interface at localhost:8000/admin/auth/user/. The page title is 'Django administration' and it says 'WELCOME, DIVYA'. The breadcrumb is 'Home > Authentication and Authorization > Users'. A green message bar at the top says 'The Record lokayukta IS Saved Succesfully!'. Below this, there is a 'Select user to change' section with a search bar and a table of users. The table has columns: USERNAME, EMAIL ADDRESS, FIRST NAME, LAST NAME, and STAFF STATUS. One user is listed: 'divya' with email 'd.shenoy26@gmail.com' and staff status 'Yes'. A 'FILTER' sidebar on the right shows filters for 'By staff status', 'By superuser status', and 'By active', each with 'All', 'Yes', and 'No' options.

Django administration

WELCOME, DIVYA VIEW SITE / CHANGE PASSWORD / LOG OUT

Home > Authentication and Authorization > Users

The Record lokayukta IS Saved Succesfully!

Select user to change

ADD USER +

Search

Action: Go 0 of 1 selected

USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF STATUS
divya	d.shenoy26@gmail.com			Yes

1 user

FILTER

By staff status

All Yes No

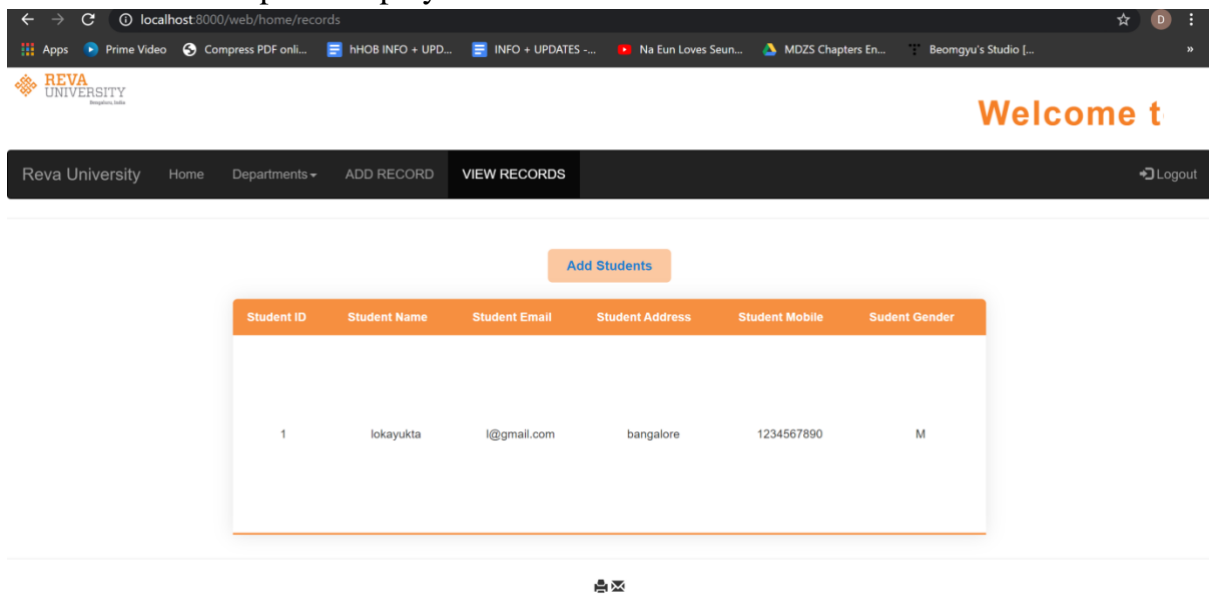
By superuser status

All Yes No

By active

All Yes No

The view record option display the data from the database.



The screenshot shows a web browser at localhost:8000/web/home/records. The page has a Reva University logo and a 'Welcome t' message. A navigation bar includes 'Reva University', 'Home', 'Departments', 'ADD RECORD', 'VIEW RECORDS', and a 'Logout' button. Below the navigation bar is a table with the following data:

Student ID	Student Name	Student Email	Student Address	Student Mobile	Sudent Gender
1	lokayukta	l@gmail.com	bangalore	1234567890	M

Below the table is a small icon of a person and a mail icon.

With this we have managed to show all the concepts we learnt in sdp.

