Adhyapan

Submitted in partial fulfillment for the requirements of the award of

degree

of

Bachelor of Computer Application

Submitted by

Sagar Dewangan

MU18BCA022

(2020 –2021)

MSIT
MATS UNIVERSITY, RAIPUR

DECLARATION

This is to certify that project work entitled **Adhyapan** is submitted by **Sagar Dewangan** in complete fulfillment of the requirement of BCA VI Semester Offered at MATS University, Raipur, Chhattisgarh comprises my/our original work and due acknowledgement has been made in the text to all related references used.

Signature of Candidate

Sagar Dewangan

ACKNOWLEDGMENT

Sagar Dewangan

I am highly grateful to the **Dr**. **Gyanesh Shrivastava**, HOD MATS School of Information Technology, MATS University, Raipur, Chhattisgarh, for providing this opportunity to carry out the Major Project at Adhyapan.

I would like to expresses my gratitude to other faculty members of MATS School of Information Technology, for providing academic inputs, guidance & encouragement throughout this period.

The author would like to express a deep sense of gratitude and thank **Effcon Technology pvt ltd**, Raipur, without whose permission, wise counsel and able guidance, it would have not been possible to carry out my project in this manner.

The help rendered by **Mr.Afroz Loya**, Supervisor (Django) for experimentation is greatly acknowledged.

Finally, I express my indebtedness to all who have directly or indirectly contributed to the successful completion of my major project.

Sagar Dewangan

CERTIFICATE

This is to certify that the project report entitled **"Adhyapan "** Done by
Sagar Dewangan
Student of **Bachelor of Computer Application at MATS University** under the guidance of **Dr.Gyanesh Shrivastava (HOD)**.

The matter embodies in the project has not been submitted earlier for the award of any degree or diploma to the best of my knowledge and belief.

Date: 08-06-2021

Dr.Gyanesh Shrivastava

Head of Department

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Certificate no: EN/QMS/00297

Certificate

This is to certify that **SAGAR DEWANGAN BCA.**, student of **MATS University, Raipur** with Reg. no. **MU18BCA022** has successfully completed System development project (system design & Implementation) work titled **"Adhyapan"** as part of his course curriculum.

He has done this project using **Python with Django** by attending online classes from **22 March 2021 to 22 May 2021** under the guidance and supervision of **Mr. Afroz Loya, Sr. Software Engineer, Effcon Technology Raipur.**

He has completed the assigned project successfully within the time frame. He is sincere hardworking and his conduct during his project is commendable.

We wish him all the best in his future endeavors.

for Effcon Technology

Project guide

Regards

Afroz Loya (Director)

Effcon
ISO9001:2015 Certified Company

Suraj Sahu

Admin

EFFCON (ISO 9001:2015) www.effcon.co.in **8770608040**
Address: Prem Palace, Near OCM Chowk, behind Hindu high school, Baron bazar, Raipur (C.G.) 492001

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20210115110029

Certificate of Training

This is to certify that

SAGAR DEWANGAN

Has successfully completed a training on

Python with Django

at **EFFCON Raipur**

from **22 March 2021** to **22 May 2021**

Mr. Suraj Sahu
Administrative

Afroz

Mr. Afroz Loya
Sr. Trainer

An ISO 9001:2015 Certified Company

INDEX

Chapter – 1-INTRODUCTION

1.1Overview

A "Adhyapan" portal project that acts as an online portal between students and the admin. The system is designed for a particular Branch such as BCA or diploma. It contains an admin who can enter details. Student can register their id. Students can then login and ask Question When students login they can see their Previous Asked Question and also a download page where students may download pdf format Ebooks or Notes from the web system.

Main modules of Adhypan are related to:

- Administrator Module
- User Module
- Videos Module
- Notes Module
- Registration Module
- Contact Module
- Ask Question Moudle
- Authentication module

Adhypan offers unique advantages over conventional methodologies:

- Easy to understand and operate.
- Stores and manages the data.
- Monitors the information.
- Shows the information.
-

1.2Objective

The main objective behind construction of this portal is to provide a single place to students from where they can do all the study related activates without login to different websites.

1.3Scope

There are also few features which can be integrated with this system to make it more flexible. Below list shows the future points to be consider.

- The objective is to develop an Online Portal System to promote and encourage students
- Our project replaces the conventional and inconvenient method of clearing doubts in classes which involves the mentor and student to be physically present at the same time.
- In this context arises the importance of our project. This project bridges the existing gap between mentor and students due to the time constraints.

Chaper-2-PROJECT FEASIBILITY STUDY

Feasibility Study

A feasibility analysis is used to determine the viability of an idea, like ensuring a project is legally and technically feasible as well as economically justifiable during the development of this project, the feasibility study was done as follows:
1) Project Requirements: The following objectives were proposed in order for the successful development of the project.

- User Registration
- User Login
- Administrator Login
- Separate Account Page for each User.
- Administrators can Add or Delete Resources if desired etc.

Operational Feasibility

The present system has automated most of the manual tasks. Therefore the proposed system will increase the operational efficiency of the administrator and user.

2.1 TECHNICAL ASPECTS

2.2 HARDWARE SPECIFICATION

- Processor :- Intel(R) Core (TM) i3-4210U CPU @1.70GHz
- RAM :- 8.00 GB
- Hard Disk :- 20 GB
- Keyboard :- Normal or Multimedia
- Mouse : - Compatible Mouse

2.3SOFTWARE SPECIFICATION

Front end :-- HTML + CSS (+Bootstrap)

Back end :-- **(**Django) Python

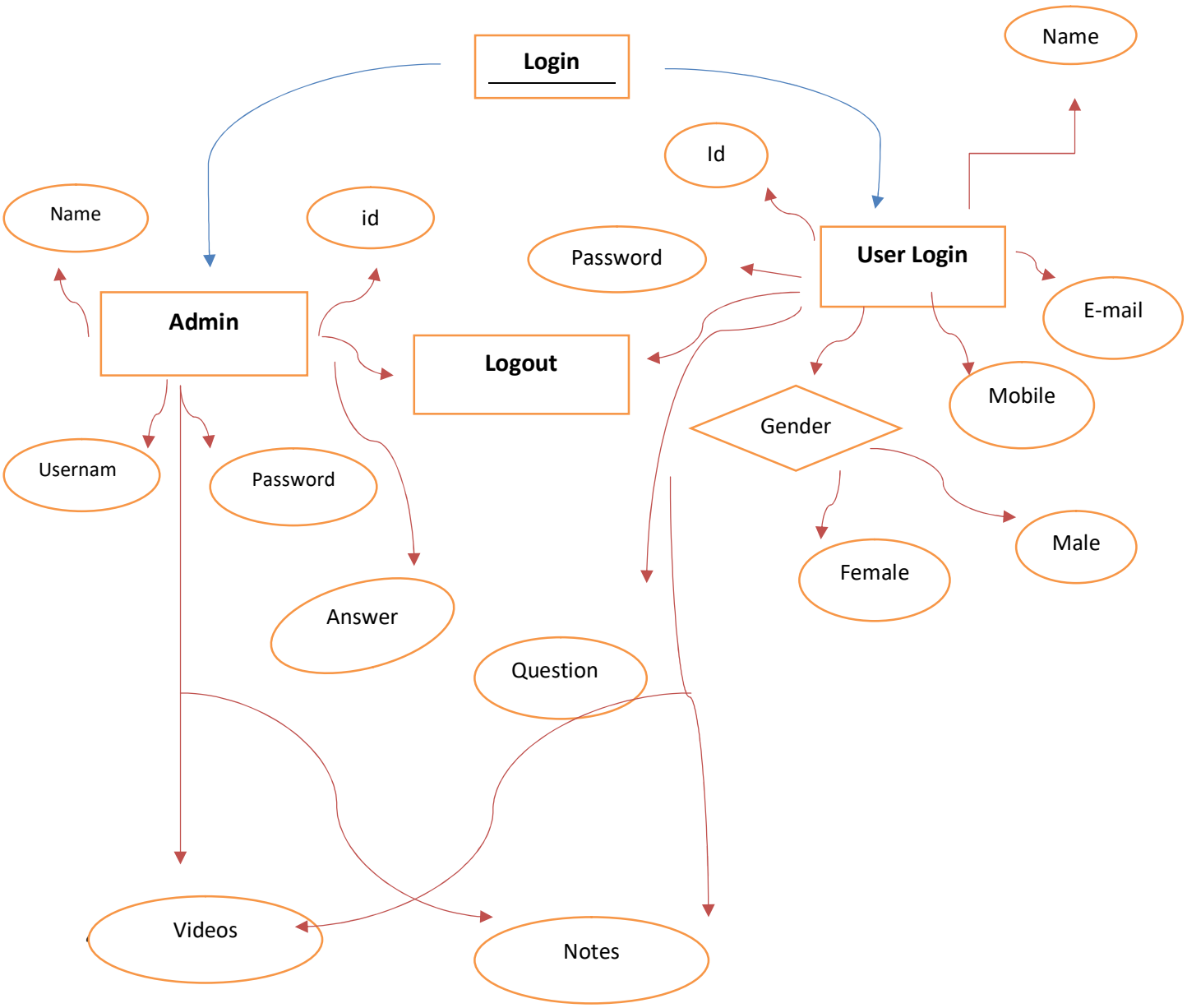
Operating System: Window XP, Vista, 7, 8, 8.1, 10,

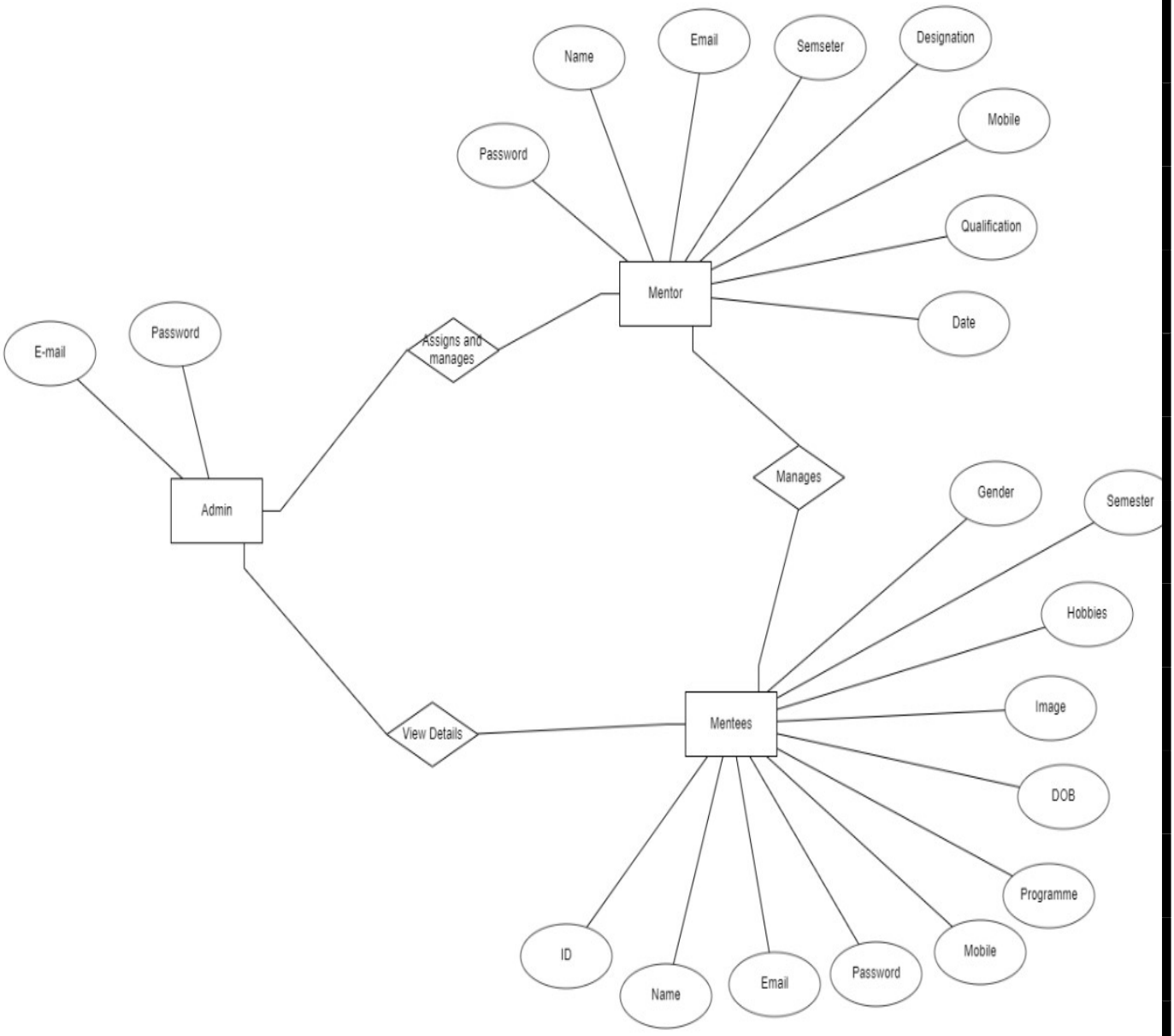
Programming Language:-- Python,+ Html,+ Css(+bootstrap)

.

Chapter-3-PROCESS DESCRIPTION/METHODOLOGY

4.1 DATA FLOW DIAGRAM (DFD)

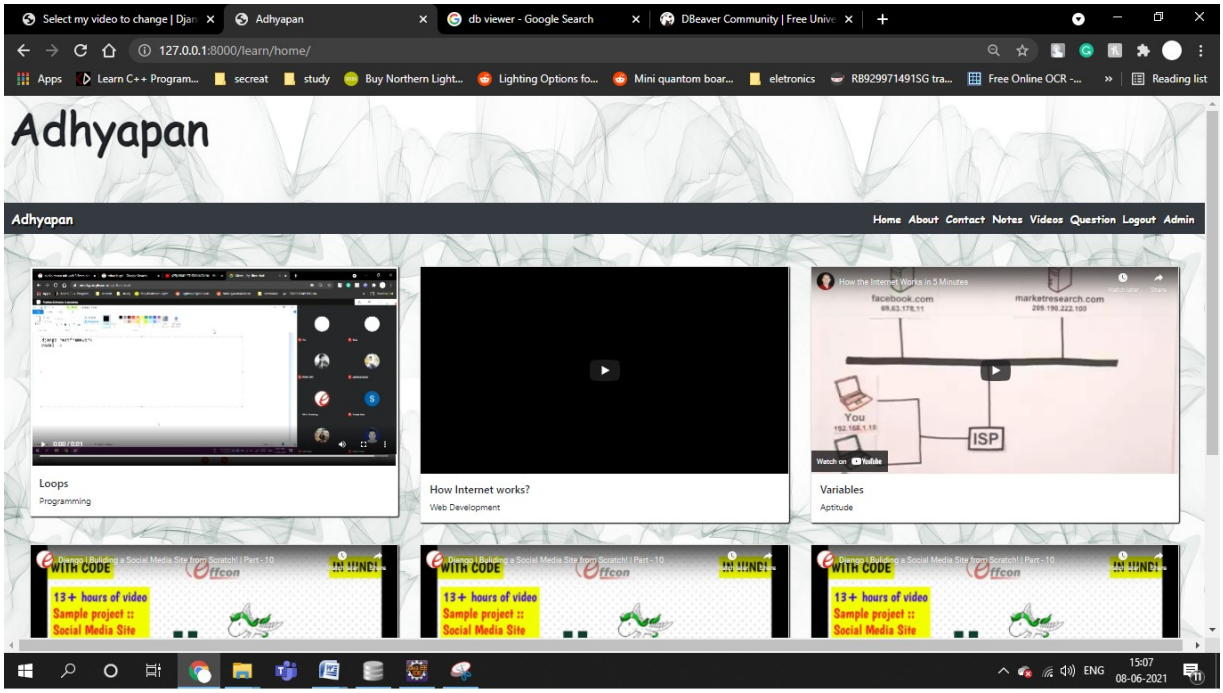




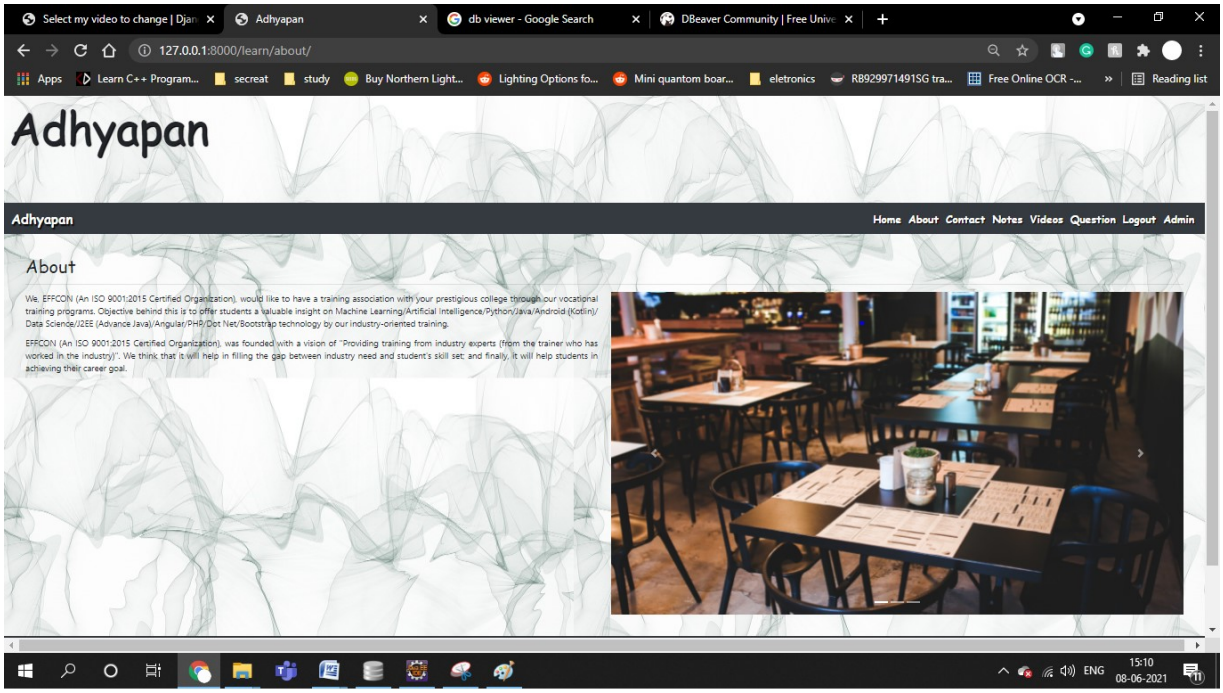
4.3 DATABASE DESIGN

Chapter – 4-SCREENSHOTS

HOME PAGE



ABOUT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About
We, EFFCON (An ISO 9001:2015 Certified Organization), would like to have a training association with your prestigious college through our vocational training programs. Objective behind this is to offer students a valuable insight on Machine Learning/Artificial Intelligence/Python/Java/Android (Kotlin)/ Data Science/J2EE (Advance Java)/Angular/PHP/Dot Net/Bootstrap technology by our industry-oriented training.
EFFCON (An ISO 9001:2015 Certified Organization), was founded with a vision of "Providing training from industry experts (from the trainer who has worked in the industry)". We think that it will help in filling the gap between industry need and student's skill set; and finally, it will help students in achieving their career goal.
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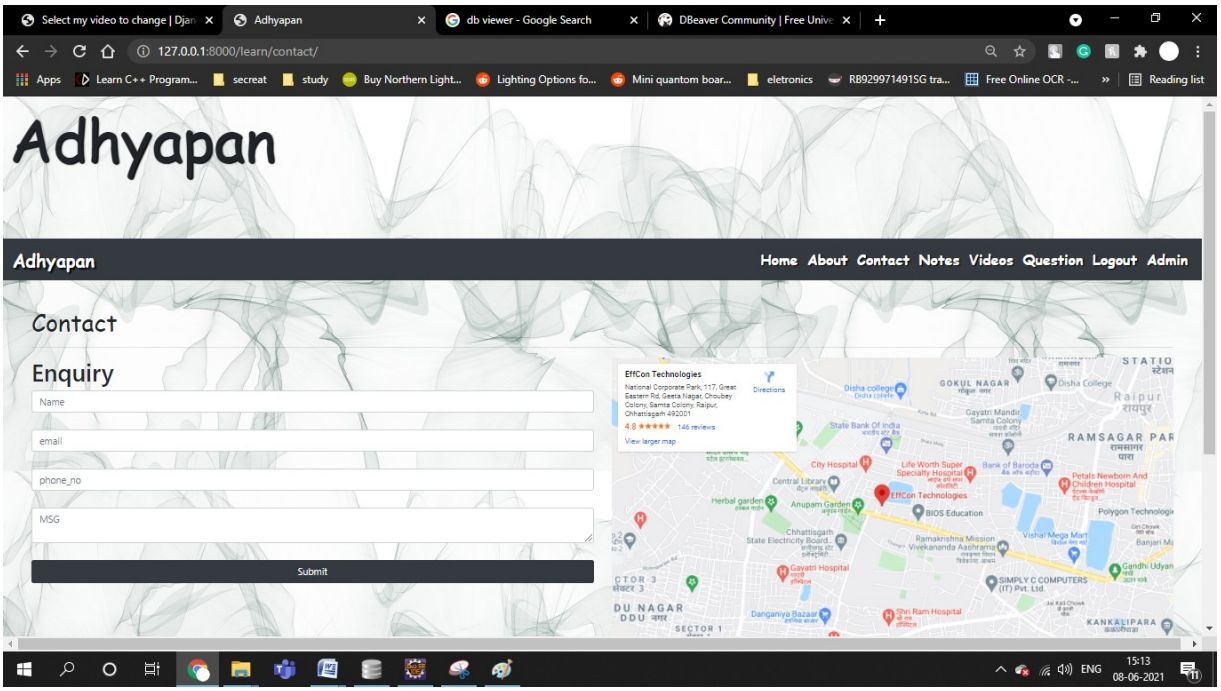
Contact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Petals Newborn And Children Hospital
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Herbal garden
Anupam Garden
BIOS Education
Chhattisgarh State Electricity Board
Vishal Mega Mart
Ramakrishna Mission Vivekananda Aashrama
Gavatri Hospital
SIMPLY C COMPUTERS (IT) Pvt. Ltd.
DU NAGAR
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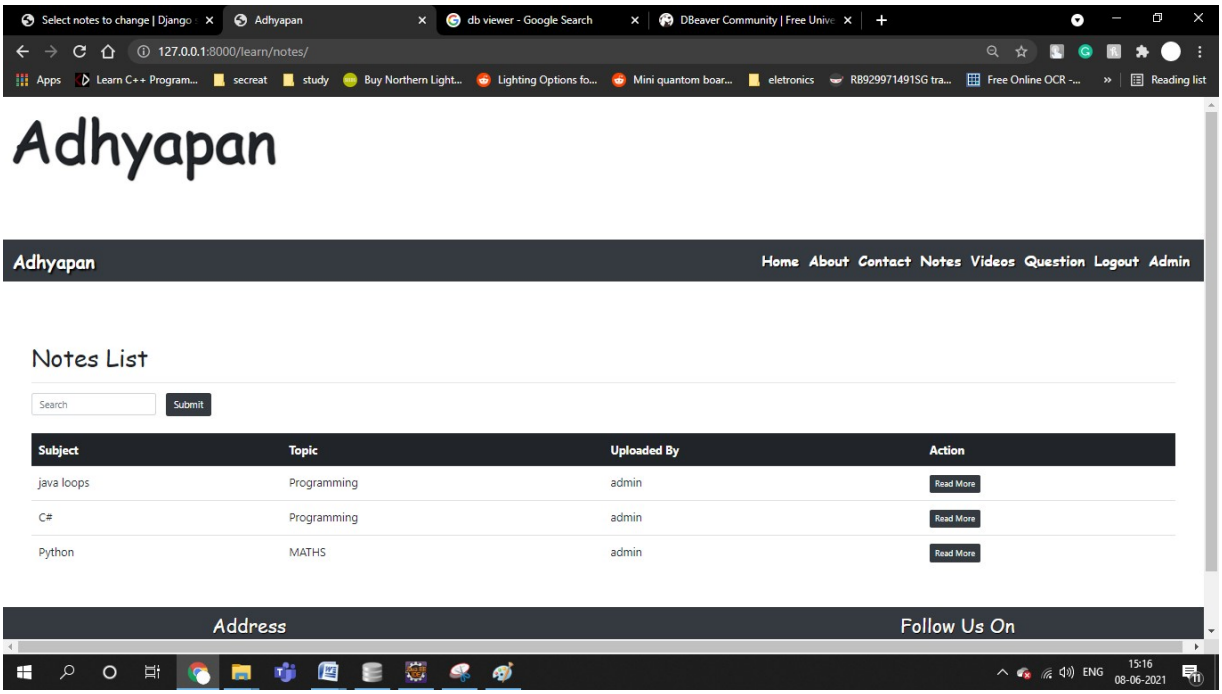
Notes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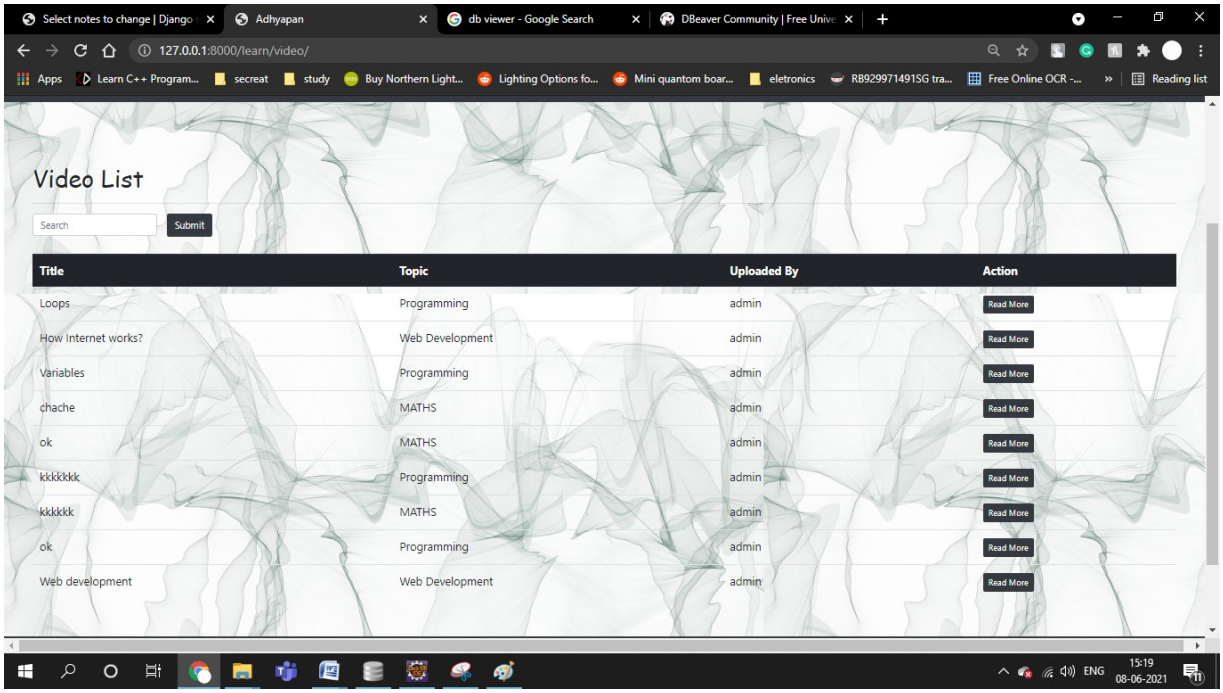
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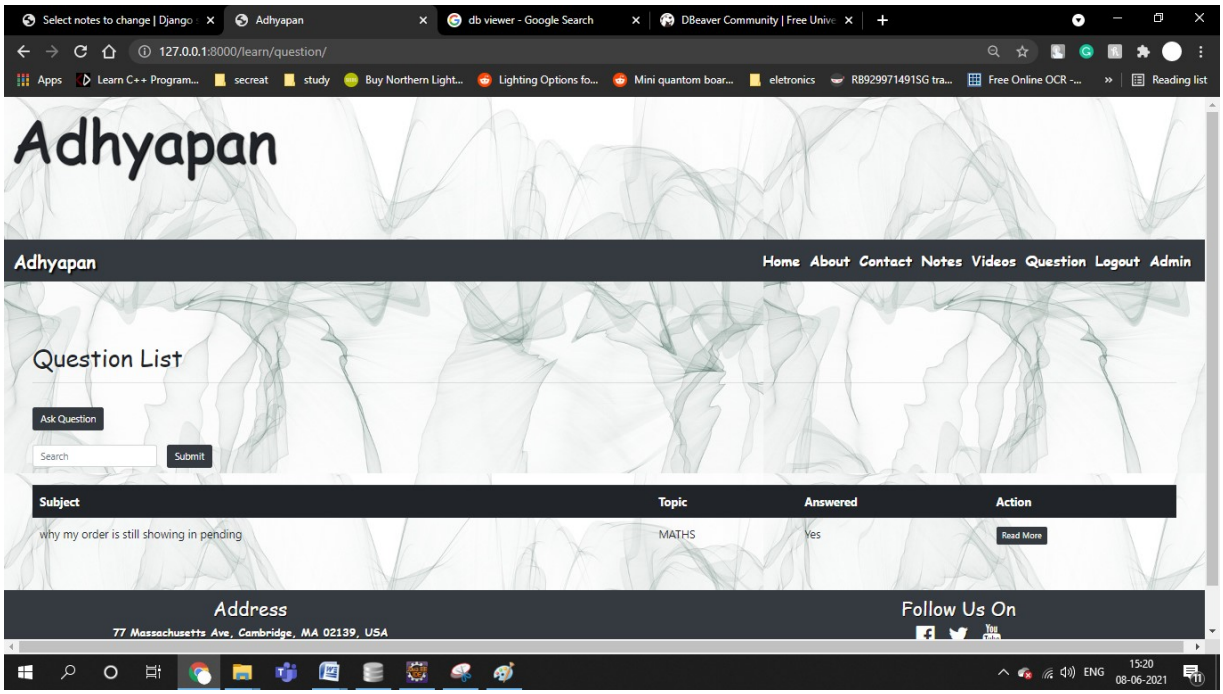
Questions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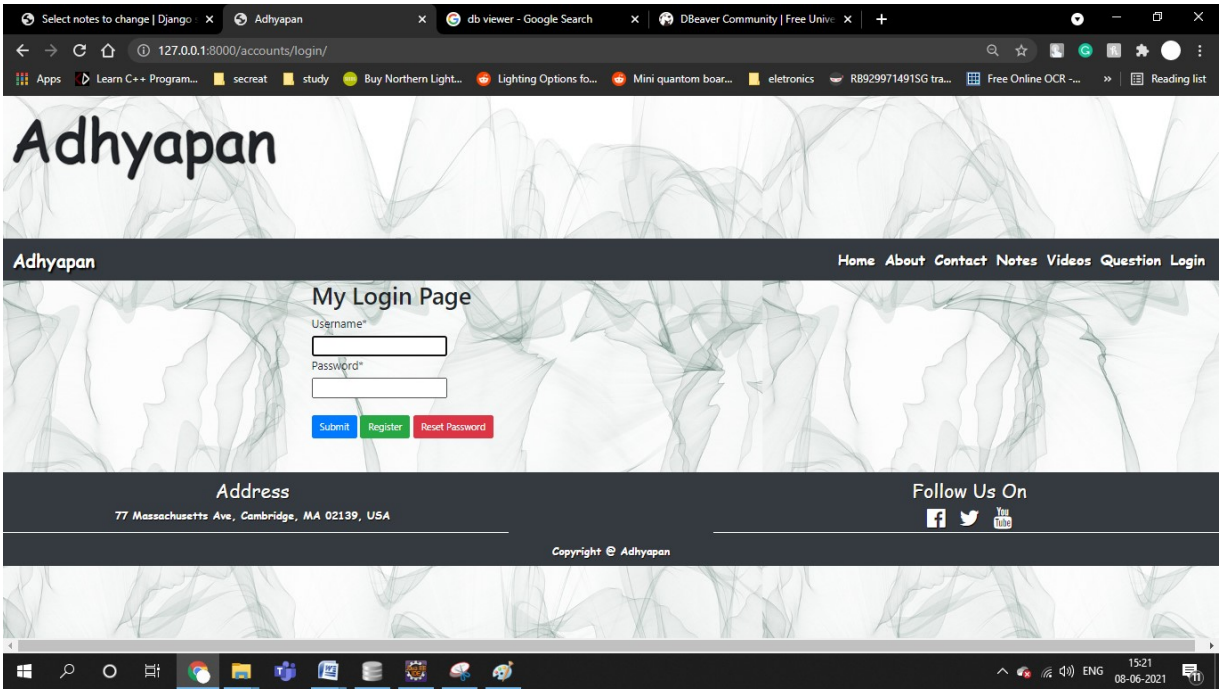
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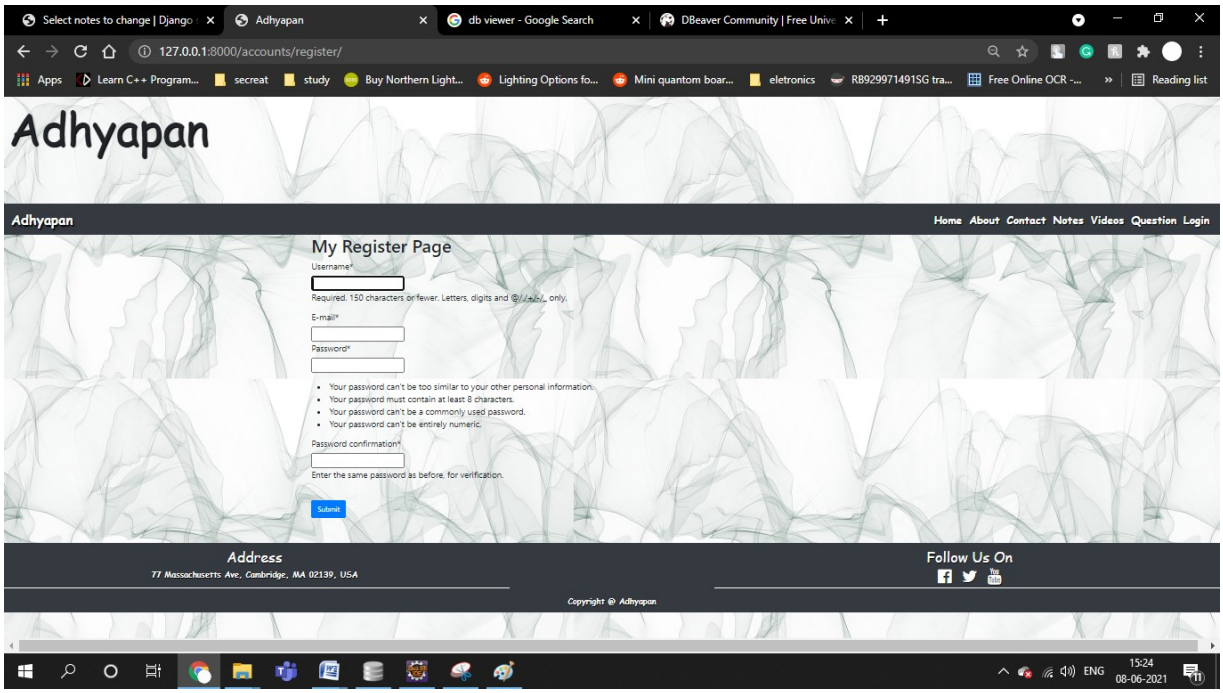
Register page



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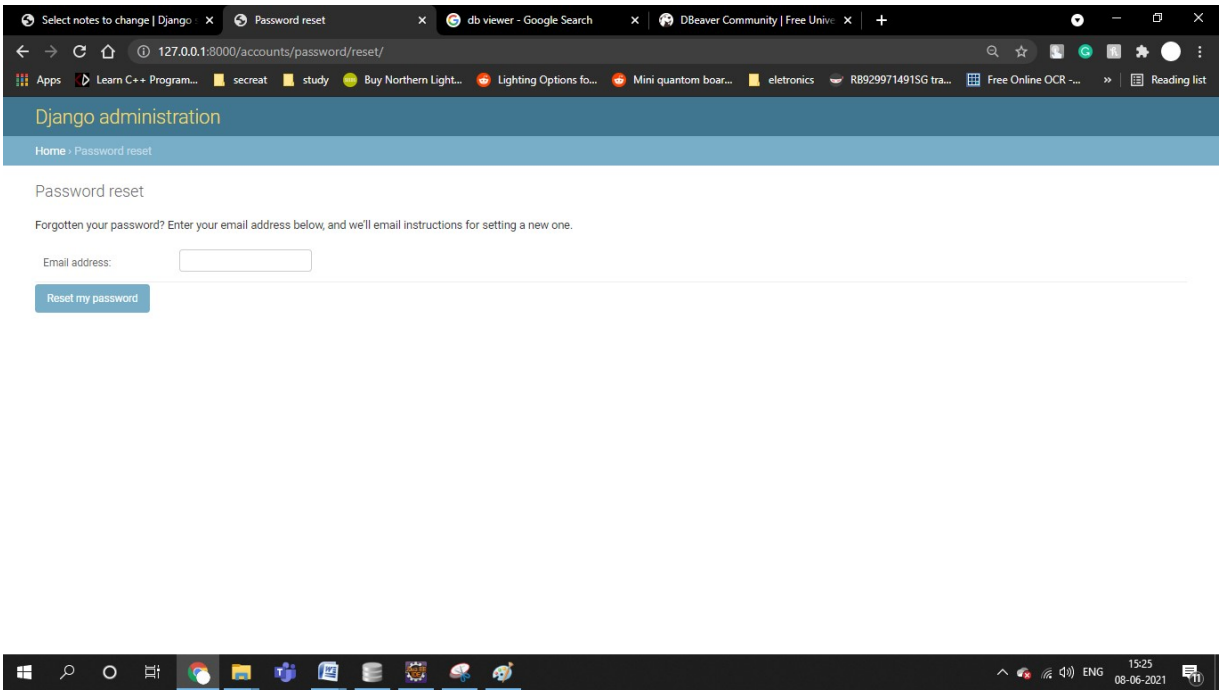
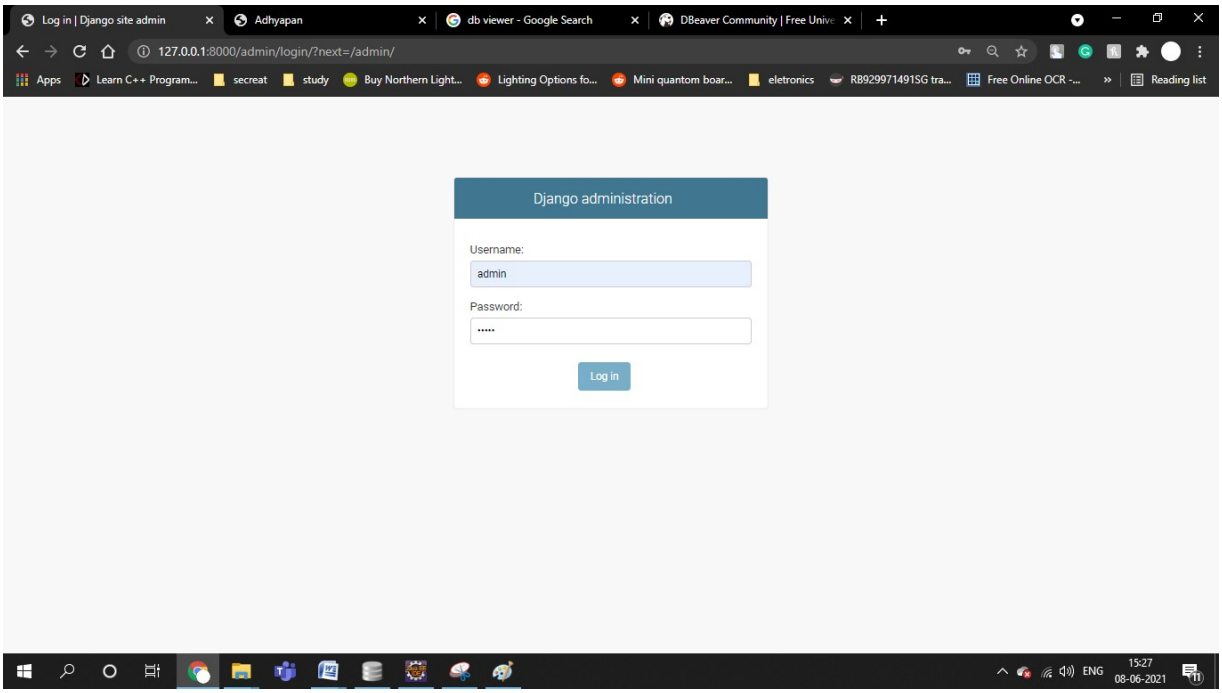


Admin Login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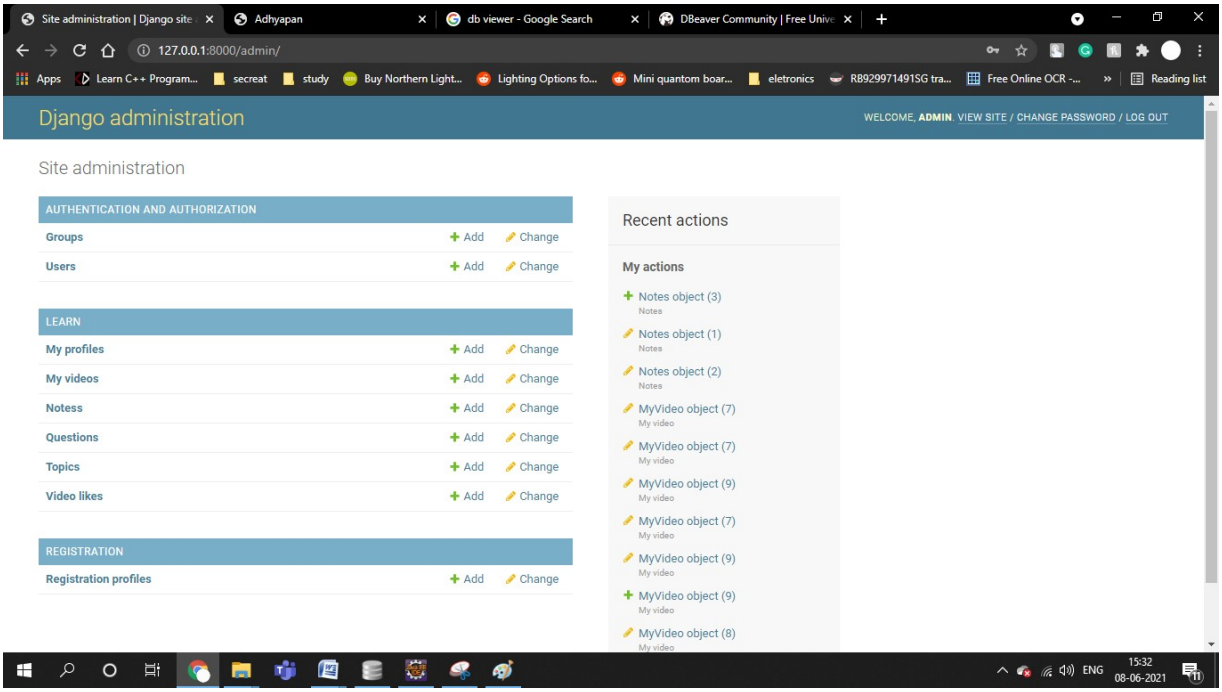
Admin Dashboard



Chapter-5-CODING

6.1 Software Analysis

The act, process or profession of studying typically by mathematical means in order to define its foal or purpose and to discover operations and procedures for accomplishing them most efficiently.System analysis is a management technique, which help in designing a new system or improving an existing system. System analysis is the process of gathering and interpreting facts, diagnosing problems, using information to recommend improvement to the systems. There are four basic element of system analysis:-

Output, Input, Files, Processor.

For computerization of any system, the existing system must be thoroughly being understood to determine "how the computer can be best used to make its operation most effective". This is analyzing existing system. Purpose of this phase is to translate the software design into source code. During this phase each component of this design is implemented as the program module and other each of this module is tested.

Code Efficiency:-

Code efficiency means how much time this software takes to gives response and also which recourses it requires. These packages are purely database and in this lot of data are stored. It takes less time to give response to user. Users can fetch out any information relating to project easily and fast.

6.2 Sample Code

Models.py

```
from django.db import models
from django.db.models.deletion import CASCADE
from django.contrib.auth.models import User

# Create your models here.
class Topic(models.Model):
    name = models.CharField(max_length = 100)
    def __str__(self):
        return self.name

class MyProfile(models.Model):
    user = models.OneToOneField(to=User,
on_delete=CASCADE)


class MyVideo(models.Model):
    title = models.CharField(max_length = 100)
    topic = models.ForeignKey(to=Topic,
on_delete=CASCADE, null=True, blank=True)
    cr_date = models.DateTimeField(auto_now_add=True)
    description = models.TextField()
    uploaded_by = models.ForeignKey(to=User,
on_delete=CASCADE, null=True, blank=True)
    video = models.FileField(upload_to ="video//"
,null=True, blank=True)
    youtube_link = models.CharField(max_length=200
,null=True, blank=True)

class VideoLike(models.Model):
```

```
    video = models.ForeignKey(to=MyVideo,
on_delete=CASCADE, null=True, blank=True)
    liked_by = models.ForeignKey(to=User,
on_delete=CASCADE, null=True, blank=True)

class Notes(models.Model):
    subject = models.CharField(max_length = 100)
    topic = models.ForeignKey(to=Topic,
on_delete=CASCADE, null=True, blank=True)
    uploaded_by = models.ForeignKey(to=User,
on_delete=CASCADE, null=True, blank=True)
    description = models.TextField()
    attachment = models.FileField(upload_to ="docs//"
,null=True, blank=True)

class Question(models.Model):
    subject = models.CharField(max_length = 100)
    topic = models.ForeignKey(to=Topic,
on_delete=CASCADE, null=True, blank=True)
    question = models.TextField()
    cr_date = models.DateTimeField(auto_now_add=True)
    asked_by = models.ForeignKey(to=User,
on_delete=CASCADE, null=True, blank=True)
    answer = models.TextField()
```

Views.py

```
from django.shortcuts import render
from django.views.generic.base import TemplateView
from django.views.generic.list import ListView
from learn.models import MyVideo, MyProfile, Notes, Question, Topic,
VideoLike
from django.db.models import Q
from django.views.generic.detail import DetailView
from django.utils.decorators import method_decorator
from django.contrib.auth.decorators import login_required
from django.views.generic.edit import CreateView
from django.http.response import HttpResponseRedirect
from django.core.mail import send_mail
# Create your views here.

def contact(req):
    sub = "Adhyapan Contact :: %s " % req.POST.get("uname")
    body = "Phone No = %s\nEMail = %s\nMessage = %s " %
(req.POST.get("phone_no"), req.POST.get("email"),  req.POST.get("msg"))
    send_mail(
        sub,
        body,
        req.POST.get("email"),
        ['aloya.effcon@gmail.com'],
        fail_silently=False,
    )
    return HttpResponseRedirect("/learn/home?msg=Submited
Successfully")



class HomeView(TemplateView):
    template_name = "learn/home.html"
    def get_context_data(self, **kwargs):
        context = TemplateView.get_context_data(self, **kwargs)
        context["videos"] = MyVideo.objects.all().order_by('-id')[:6];
        return context;
```

```
class AboutView(TemplateView):
    template_name = "learn/about.html"

class ContactView(TemplateView):
    template_name = "learn/contact.html"


class VideoListView(ListView):
    model = MyVideo
    def get_queryset(self):
        si = self.request.GET.get("si")
        if si == None:
            si = ""
        return MyVideo.objects.filter(Q(title__icontains = si)|
Q(description__icontains = si)).order_by("-id")


class VideoDetailView(DetailView):
    model = MyVideo


class NotesListView(ListView):
    model = Notes
    def get_queryset(self):
        si = self.request.GET.get("si")
        if si == None:
            si = ""
        return Notes.objects.filter(Q(subject__icontains = si)|
Q(description__icontains = si)).order_by("-id")


class NotesDetailView(DetailView):
    model = Notes

@method_decorator(login_required, name="dispatch")
class QuestionCreate(CreateView):
    model = Question
    fields = ["subject", "topic", "question"]
```

```
    def form_valid(self, form):
        self.object = form.save()
        self.object.asked_by = self.request.user
        self.object.save()
        return HttpResponseRedirect(self.get_success_url())


class QuestionListView(ListView):
    model = Question
    def get_queryset(self):
        si = self.request.GET.get("si")
        if si == None:
            si = ""
        return Question.objects.filter(Q(subject__icontains = si)|
Q(topic__name__icontains = si)).order_by("-id")


class QuestionDetailView(DetailView):
    model = Question



#
# @method_decorator(login_required, name="dispatch")
# class ProfileUpdate(UpdateView):
#     model = Profile
#     fields = ["branch", "sem", "marks_10", "marks_12", "marks_aggr", "rn",
"phone_no", "email", "skills", "myimg", "myresume"]
#
#
#
# @method_decorator(login_required, name='dispatch')
# class MyList(TemplateView):
#     template_name = "college/mylist.html"
#     def get_context_data(self, **kwargs):
#         context = TemplateView.get_context_data(self, **kwargs)
#         context["notices"] = Notice.objects.all().order_by('-id')[:3];
#         context["questions"] = Question.objects.all().order_by('-id')[:3];
#         return context;
```

Url.py

```
from django.contrib import admin
from django.urls import path
from django.urls.conf import include
from learn import views
from django.views.generic.base import RedirectView
urlpatterns = [
    path('home/', views.HomeView.as_view()),
    path('about/', views.AboutView.as_view()),
    path('contact/', views.ContactView.as_view()),

    path('video/', views.VideoListView.as_view()),
    path('video/<int:pk>', views.VideoDetailView.as_view()),

    path('notes/', views.NotesListView.as_view()),
    path('notes/<int:pk>', views.NotesDetailView.as_view()),

    path('question/', views.QuestionListView.as_view()),
    path('question/<int:pk>', views.QuestionDetailView.as_view()),
    path('question/create/',
views.QuestionCreate.as_view(success_url="/learn/question")),

    path('contact/submit', views.contact),

    path('', RedirectView.as_view(url="home/")),
]
```

Admin.py

```
from django.contrib import admin
from learn.models import MyProfile, MyVideo, Notes, Question, Topic,
VideoLike
from django.contrib.admin.options import ModelAdmin

# Register your models here.

admin.site.register(Topic)

class MyProfileAdmin(ModelAdmin):
    search_fields = ["user"]
admin.site.register(MyProfile, MyProfileAdmin)


class MyVideoAdmin(ModelAdmin):
    list_display = ["title", "topic"]
    search_fields = ["title", "description", "uploaded_by"]
    list_filter = ["cr_date", "topic"]
admin.site.register(MyVideo, MyVideoAdmin)

class NotesAdmin(ModelAdmin):
    list_display = ["subject", "topic"]
    search_fields = ["subject", "description", "topic"]
    list_filter = ["uploaded_by", "topic"]
admin.site.register(Notes, NotesAdmin)

class QuestionAdmin(ModelAdmin):
    list_display = ["subject", "topic"]
    search_fields = ["subject", "question", "answer"]
    list_filter = ["topic", "cr_date"]
admin.site.register(Question, QuestionAdmin)

class VideoLikeAdmin(ModelAdmin):
    list_display =  ["video", "liked_by"]
    search_fields = ["video", "liked_by"]
```

```
    list_filter = ["video", "liked_by"]
admin.site.register(VideoLike, VideoLikeAdmin)
```

Project settings.py

```
"""
Django settings for Adhyapan project.

Generated by 'django-admin startproject' using Django 2.1.4.

For more information on this file, see
https://docs.djangoproject.com/en/2.1/topics/settings/

For the full list of settings and their values, see
https://docs.djangoproject.com/en/2.1/ref/settings/
"""

import os

# Build paths inside the project like this: os.path.join(BASE_DIR, ...)
BASE_DIR = os.path.dirname(os.path.dirname(os.path.abspath(__file__)))


# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/2.1/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!
SECRET_KEY = '2x$)oa&%r9-(aqvq2roh4&m8-4l%!@a!e@2(7=9_@x#(-&5r7%'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = []


# Application definition

INSTALLED_APPS = [
```

```
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'learn',
    'registration',
    'crispy_forms',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]

ROOT_URLCONF = 'Adhyapan.urls'

TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]

WSGI_APPLICATION = 'Adhyapan.wsgi.application'
```

```
# Database
# https://docs.djangoproject.com/en/2.1/ref/settings/#databases

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.sqlite3',
        'NAME': os.path.join(BASE_DIR, 'db.sqlite3'),
    }
}


# Password validation
# https://docs.djangoproject.com/en/2.1/ref/settings/#auth-password-
validators

AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME':
'django.contrib.auth.password_validation.UserAttributeSimilarityValidator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME':
'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]


# Internationalization
# https://docs.djangoproject.com/en/2.1/topics/i18n/
```

```
LANGUAGE_CODE = 'en-us'

TIME_ZONE = 'Asia/Kolkata'

USE_I18N = True

USE_L10N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/2.1/howto/static-files/

STATIC_URL = '/static/'


ACCOUNT_ACTIVATION_DAYS=3

EMAIL_HOST= 'smtp.gmail.com'
EMAIL_HOST_USER= 'effcon.smtp.21@gmail.com'
EMAIL_HOST_PASSWORD= 'admin@12345'
EMAIL_PORT= 587
EMAIL_USE_TLS= True

LOGIN_REDIRECT_URL = "/"

PROJECT_ROOT = os.path.realpath(os.path.dirname(__file__))
MEDIA_ROOT = PROJECT_ROOT + '/static/'
MEDIA_URL = '/media/'
```

Templates

Base.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Adhyapan</title>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<link href="/static/vender/bs/css/bootstrap.min.css" rel="stylesheet" />
<script src="/static/vender/jquery-3.3.1.min.js"></script>
<script src="/static/vender/popper.min.js"></script>
<script src="/static/vender/bs/js/bootstrap.min.js"></script>
<link href="/static/vender/fa/css/font-awesome.min.css" rel="stylesheet" />
<link href="/static/style.css" rel="stylesheet" />
</head>
<body>
<header id="myhead2">
<h1 class="myhead">Adhyapan</h1>
<!--     <img class="w-100 h-100" src="/static/images/banner.jpg"/>-->
</header>

<nav class="navbar navbar-expand-md navbar-dark bg-dark">
   <a class="navbar-brand" href="#">Adhyapan</a>
   <button class="navbar-toggler d-lg-none" type="button" data-toggle="collapse" data-
target="#collapsibleNavId" aria-controls="collapsibleNavId"
      aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
   </button>
   <div class="collapse navbar-collapse" id="collapsibleNavId">
      <ul class="navbar-nav ml-auto mt-2 mt-lg-0">
         <li class="nav-item active">
            <a class="nav-link" href="/learn/home">Home</a>
         </li>
         <li class="nav-item">
            <a class="nav-link" href="/learn/about">About</a>
         </li>
         <li class="nav-item">
            <a class="nav-link" href="/learn/contact">Contact</a>
         </li>
         <li class="nav-item">
            <a class="nav-link" href="/learn/notes">Notes</a>
         </li>
         <li class="nav-item">
```

```
            <a class="nav-link" href="/learn/video">Videos</a>
        </li>
        <li class="nav-item">
            <a class="nav-link" href="/learn/question">Question</a>
        </li>
        {% if user.is_authenticated %}
        <li class="nav-item">
            <a class="nav-link" href="/accounts/logout">Logout</a>
        </li>
                    {% else %}
        <li class="nav-item">
            <a class="nav-link" href="/accounts/login">Login</a>
        </li>
                    {% endif %}
                    {% if user.is_superuser %}
        <li class="nav-item">
            <a class="nav-link" href="/admin">Admin</a>
        </li>
                    {% else %}
                        {% if user.is_authenticated %}
                    <li class="nav-item">
                        <a class="nav-link" href="/learn/question/create/">Ask
Question</a>
                    </li>
                        {% endif %}
                    {% endif %}

    </ul>
  </div>
</nav>
{% block content %}
{% endblock %}
<footer class="bg-dark text-white text-center p-1 myfooter">
<div class="row">
<div class="col-sm-5 my-2">
<h2>Address</h2>
<p>77 Massachusetts Ave, Cambridge, MA 02139, USA</p>
</div>
<div class="col-sm-5 offset-sm-2 my-2">
<h2>Follow Us On</h2>
        <a href="#"><span class="fa fa-facebook-official fa-2x mx-2"></span></a>
        <a href="#"><span class="fa fa-twitter fa-2x  mx-2"></span></a>
        <a
href="https://www.youtube.com/channel/UCMZwWDcN1q5qphqzRa44LKA"><span
class="fa fa-youtube fa-2x  mx-2"></span></a>
</div>
```

```
</div>
<p class="my-2">Copyright @ Adhyapan</p>
</footer>
</body>
</html>
```

Home Index Page

```
{% extends 'base.html' %}
{% block content %}
<div>
{% if request.GET.msg %}
<div class="alert alert-primary alert-dismissible fade show"
role="alert">
   <button type="button" class="close" data-dismiss="alert" aria-
label="Close">
      <span aria-hidden="true">&times;</span>
      <span class="sr-only">Close</span>
   </button>
   <strong>Adhayapan!</strong> {{ request.GET.msg }}.
</div>
{% endif %}

<div class="row p-5">
       {% for v1 in videos %}
       <div class="col-sm-4 p-4">
       <div class="card">

       {% if v1.video %}
             <video class="card-img-top p-1"  controls class="w-100">
               <source src="/media/{{v1.video}}" type="video/mp4">
             </video>

             {% else %}
             <div  class="embed-responsive embed-responsive-
16by9">
                    <iframe class="embed-responsive-item"
src="https://www.youtube.com/embed/{{v1.youtube_link}}"
frameborder="0" allow="accelerometer; autoplay; encrypted-media;
gyroscope; picture-in-picture" allowfullscreen></iframe>
             </div>
             {% endif %}
   <div class="card-body">
      <h4 class="card-title">{{v1.title}}</h4>
      <p class="card-text">{{v1.topic}}</p>
```

```
    </div>
        </div>
        </div>
        {% endfor %}
</div>
</div>
{% endblock %}
```

About.html

```
{% extends 'base.html' %}
{% block content %}
<main class="p-5">
<h1 class="myhead1">About</h1>
<hr>
<div class="row text-justify">
<div class="col-sm-6">
        <p>We, EFFCON (An ISO 9001:2015 Certified Organization), would like to have a training association with your prestigious college through our vocational training programs. Objective behind this is to offer students a valuable insight on Machine Learning/Artificial Intelligence/Python/Java/Android (Kotlin)/ Data Science/J2EE (Advance Java)/Angular/PHP/Dot Net/Bootstrap technology by our industry-oriented training. </p>
        <p>EFFCON (An ISO 9001:2015 Certified Organization), was founded with a vision of "Providing training from industry experts (from the trainer who has worked in the industry)". We think that it will help in filling the gap between industry need and student's skill set; and finally, it will help students in achieving their career goal.</p>
</div>
<div class="col-sm-6">

<div id="carouselId" class="carousel slide" data-ride="carousel">
    <ol class="carousel-indicators">
        <li data-target="#carouselId" data-slide-to="0" class="active"></li>
        <li data-target="#carouselId" data-slide-to="1"></li>
        <li data-target="#carouselId" data-slide-to="2"></li>
    </ol>
    <div class="carousel-inner" role="listbox">
        <div class="carousel-item active">
            <img class="img-fluid w-100" src="/static/images/a1.jpg" >
        </div>
        <div class="carousel-item">
            <img class="img-fluid w-100" src="/static/images/a2.jpg" >
        </div>
```

```
        <div class="carousel-item">
            <img class="img-fluid w-100" src="/static/images/a3.jpg" >
        </div>
    </div>
    <a class="carousel-control-prev" href="#carouselId" role="button" data-
slide="prev">
        <span class="carousel-control-prev-icon" aria-hidden="true"></span>
        <span class="sr-only">Previous</span>
    </a>
    <a class="carousel-control-next" href="#carouselId" role="button" data-
slide="next">
        <span class="carousel-control-next-icon" aria-hidden="true"></span>
        <span class="sr-only">Next</span>
    </a>
</div>


</div>
</div>
</main>
{% endblock %}
```

Contact.html

```
{% extends 'base.html' %}
{% block content %}
<main class="p-5">
<h1 class="myhead1">Contact</h1>
<hr>
<div class="row">
        <div class="col-sm-6">
        <h1>Enquiry</h1>
        <form action="/learn/contact/submit" method="post">
        {% csrf_token %}
        <input class="form-control" type="text" name="uname"
placeholder="Name" /><br>
        <input class="form-control" type="email" name="email"
placeholder="email" /><br>
        <input class="form-control" type="tel" name="phone_no"
placeholder="phone_no" /><br>
        <textarea class="form-control" placeholder="MSG"
name="msg"></textarea><br>
        <input class="btn btn-dark btn-block" type="submit"/><br>
        </form>
        </div>
        <div class="col-sm-6">
        <div class="embed-responsive embed-responsive-4by3">
        <iframe class="embed-responsive-item"
src="https://www.google.com/maps/embed?pb=!1m14!1m8!1m3!1d14874.
742904550822!2d81.6111144!3d21.2443074!3m2!1i1024!2i768!4f13.1!3m
3!1m2!1s0x0%3A0x9ed6532a6f04f63c!2sEffCon+Technologies!5e0!3m2!1
sen!2sin!4v1563194198556!5m2!1sen!2sin" frameborder="0"
style="border:0" allowfullscreen></iframe>
        </div>
        </div>
</div>
</main>

{% endblock %}
```

Myvideos.html

```
{% extends 'base.html' %}
{% block content %}
<div class="p-5">
<h1 class="myhead1">{{ myvideo.title }}</h1>
<hr>
<p><strong>Topic :: </strong> {{ myvideo.topic }}</p>
<p><strong>Description :: </strong>{{ myvideo.description }}</p>
<p><strong>Uploaded By :: </strong>{{ myvideo.uploaded_by }}</p>
<div class="row">
        <div class="col-sm-8 offset-sm-2">
                {% if myvideo.video %}
                <video controls class="w-100">
                  <source src="/media/{{myvideo.video}}" type="video/mp4">
                </video>

                {% else %}
                <div class="embed-responsive embed-responsive-16by9">
                        <iframe class="embed-responsive-item"
src="https://www.youtube.com/embed/{{myvideo.youtube_link}}"
frameborder="0" allow="accelerometer; autoplay; encrypted-media;
gyroscope; picture-in-picture" allowfullscreen></iframe>
                </div>
                {% endif %}
        </div>
</div>
<a class="btn btn-dark my-3" href='/learn/video'>Back</a>
</div>
{% endblock %}
```

Videodetails.html

```
{% extends 'base.html' %}
{% block content %}
<div class="p-5">
<h1 class="myhead1">{{ myvideo.title }}</h1>
<hr>
<p><strong>Topic :: </strong> {{ myvideo.topic }}</p>
<p><strong>Description :: </strong>{{ myvideo.description }}</p>
<p><strong>Uploaded By :: </strong>{{ myvideo.uploaded_by }}</p>
<div class="row">
        <div class="col-sm-8 offset-sm-2">
                {% if myvideo.video %}
                <video controls class="w-100">
                  <source src="/media/{{myvideo.video}}" type="video/mp4">
                </video>

                {% else %}
                <div class="embed-responsive embed-responsive-16by9">
                        <iframe class="embed-responsive-item"
src="https://www.youtube.com/embed/{{myvideo.youtube_link}}"
frameborder="0" allow="accelerometer; autoplay; encrypted-media;
gyroscope; picture-in-picture" allowfullscreen></iframe>
                </div>
                {% endif %}
        </div>
</div>
<a class="btn btn-dark my-3" href='/learn/video'>Back</a>
</div>
{% endblock %}
```

Questiondetails.html

```
{% extends 'base.html' %}
{% block content %}
<div class="p-5">
<h1 class="myhead1">{{ question.subject }}</h1>
<hr>
<p><strong>Topic :: </strong> {{ question.topic }}</p>
<p><strong>Question :: </strong>{{ question.question }}</p>
<p><strong>Asked By :: </strong>{{ question.asked_by }}</p>
<p><strong>Date :: </strong>{{ question.cr_date }}</p>
<p><strong>Answer :: </strong>{{ question.answer }}</p>
<a class="btn btn-dark my-3" href='/learn/question'>Back</a>
</div>
{% endblock %}
```

Questionform.html

```
{% extends 'base.html' %}
{% load crispy_forms_tags %}
{% block content %}
<div class="row">
        <div class="col-sm-6 offset-sm-3">
                <h1>My Question</h1>
                <form enctype="multipart/form-data" method="post">
                {% csrf_token %}
                {{ form | crispy }}<br>
                <input class="btn btn-primary" type="submit"
value="Submit"/>
                </form>   <br><br>
        </div>
</div>
{% endblock %}
```

Notes.html

```
{% extends 'base.html' %}
{% block content %}
<div class="p-5">
<h1 class="myhead1">{{ notes.Subject }}</h1>
<hr>
<p><strong>Topic :: </strong> {{ notes.topic }}</p>
<p><strong>Description :: </strong>{{ notes.description }}</p>
<p><strong>Uploaded By :: </strong>{{ notes.uploaded_by
}}</p>
<p><strong>Attachment :: </strong><a
href="/media/{{notes.attachment }}">{{ notes.attachment
}}</a></p>
<a class="btn btn-dark my-3" href='/learn/notes'>Back</a>
</div>
{% endblock %}
```

Notes list.html

```
{% extends 'base.html' %}
{% block content %}
<br><br>
<div class="p-5">
<h1 class="myhead1">Notes List</h1>
<hr>

<form class="form-inline">
<input class="form-control" value="{{ request.GET.si
}}" placeholder="Search" type="text" name="si" />
<input class="btn btn-dark mx-3" type="submit" />
</form><br>
<table class="table table-stripped">
    <thead class="thead-dark">
        <tr>
            <th>Subject</th>
            <th>Topic</th>
            <th>Uploaded By</th>
            <th>Action</th>
        </tr>
    </thead>
{% for n1 in notes_list %}
        <tr>
            <td>{{n1.subject}}</td>
            <td>{{n1.topic}}</td>
            <td>{{n1.uploaded_by}}</td>
            <td><a class="btn btn-dark btn-sm"
href="/learn/notes/{{n1.id}}">Read More</a></td>
        </tr>
{% endfor %}
```

```
</table>
</div>

{% endblock %}
```

NotesDetails.html

```
{% extends 'base.html' %}
{% block content %}
<div class="p-5">
<h1 class="myhead1">{{ notes.Subject }}</h1>
<hr>
<p><strong>Topic :: </strong> {{ notes.topic }}</p>
<p><strong>Description :: </strong>{{ notes.description
}}</p>
<p><strong>Uploaded By :: </strong>{{ notes.uploaded_by
}}</p>
<p><strong>Attachment :: </strong><a
href="/media/{{notes.attachment }}">{{ notes.attachment
}}</a></p>
<a class="btn btn-dark my-3" href='/learn/notes'>Back</a>
</div>
{% endblock %}
```

Registration form.html

```
{% extends 'base.html' %}
{% load crispy_forms_tags %}
{% block content %}
<div class="row">
      <div class="col-sm-6 offset-sm-3">
            <h1>My Register Page</h1>
            <form enctype="multipart/form-data"
method="post">
            {% csrf_token %}
            {{ form | crispy }}<br>
            <input class="btn btn-primary" type="submit"
value="Submit">
            </form>   <br><br>
      </div>
</div>
{% endblock %}
```

Login .html

```
{% extends 'base.html' %}
{% load crispy_forms_tags %}
{% block content %}
<div class="row">
      <div class="col-sm-6 offset-sm-3">
            <h1>My Login Page</h1>
            <form enctype="multipart/form-data"
method="post">
            {% csrf_token %}
            {{ form | crispy }}<br>
            <input class="btn btn-primary" type="submit"
value="Submit"/>
            <a class="btn btn-success"
href="/accounts/register/">Register</a>
            <a class="btn btn-danger"
href="/accounts/password/reset/">Reset Password</a>
            </form>   <br><br>
      </div>
</div>
{% endblock %}
```

Chapter-6-TESTING TECHNOLOGIES AND SECURITY MECHANISMS

6.1 Testing

Software testing is the process of evaluating software functionality and quality by detecting bugs and later removing them with the help of QA team or an efficient testing tool.

Testing validates a software by checking whether it is meeting business and technical requirements with guided design.

Software Testing is required for the following reasons:

- Cost Effective
- Security
- Product Quality
- Customer Satisfaction

There are several different testing techniques; Black Box and White Box testing are two such approaches commonly used by testers.

6.2 Black Box Testing

Testing is broadly based on software requirements and specifications. Black Box Testing is a technique in which tester is unaware about the internal structure or code of the software.

The focus is on inputs and outputs ignoring the internal knowledge of the code. Using black box testing, one can test operating systems like Windows, websites like Google and even our own customized applications, as the core knowledge about these operating systems are not required.

How Black Box Testing Works?

Black box testing can broadly be summarized into the following steps. The first step is to thoroughly examine the requirements and specifications of the system. The tester explores the system's UI and functionality to understand how the processes on the system are expected to work. On later stage, the tester checks efficiency of the software by determining expected outputs with their corresponding inputs. Finally, the developer fixes the bug detected and the output undergoes retesting.

Black Box Testing Techniques

There are three techniques usually employed by organizations and testers in case of Black Box Testing. Equivalent Class Testing: It is used to reduce the number of possible test cases to an ideal level to maintain a reasonable test coverage.

Boundary Value Testing: It determines whether certain range of values are accepted by the software or not. This helps in reducing number of test cases.

Decision Table Testing:A decision table puts conditions and their outcomes in a matrix. There is a unique combination in every segment.

Advantages

- Suitable for large code segments
- Increased Efficiency
- Prior knowledge of code is not required

Black box testing is all about enhancing the user experience even if they are from a non-technical background. On the other hand, for technical support and precise coding, White box testing is an excellent approach for organizations to employ. Let's understand the nitty gritty of what goes behind White Box Testing.

6.3 White Box Testing

White Box Testing is also known as open, transparent or glass box testing. In white box testing, the tester has prior knowledge of the code and accordingly prepares the test case.The tester has the knowledge of the internals of a system and knows how the

system is implemented. The tester uses this knowledge to develop test cases that will examine the control flow, information flow, data flow, exception and error handling as well as coding practices of the system.

How does White Box Testing work?

Here's how White Box Testing works...

1. The first step for the tester is to understand the source code.
2. White Box testing then involves testing of internal functions of the application, so knowledge of source code is crucial.
3. The tester should be aware of the secure coding practices as security is the most important factor in testing.
4. Tester can then write code for testing the application or can prepare certain test cases with suitable inputs.

White Box Testing Techniques

Code Coverage Analysis: It eliminates gaps in test case suite by identifying the program which cannot be examined by test cases. In addition, you can create test cases for untested part of the program which improves the quality of the software.

Statement Coverage: This technique checks every statement of the code at least once during the test cycle.

Branch Coverage: This technique tests every possible path in the code like If-else loops and other conditional loops of the software.

Advantages

- It optimizes the code as it tests every statement of the code.
- Automated testing is supported.
- Tests and test scripts can be reused.
- Testing is supported at early development stages.

Software testing is the most important part for maintaining the quality of the software. Manual and automated testing both are required to test the software thoroughly.Taking

up the black box and white box testing using an automated testing tool such as Testing Whiz is highly recommended. Automated testing allows the tester to focus more on the high priority issues plaguing on the deployment of the software instead of the repetitive mundane tasks that testing needs. This helps save time, increase productivity and efficiency of the testers along with boosting employee morale. Moreover, testers from all backgrounds can use it seamlessly.

6.4 Risk Management

Risk management in both test planning and execution phase are hot topics of discussion today, the main reason being that if applied properly the chances for software development and execution failures gets drastically reduced. The main phases of risk based testing are:

- Risk Identification
- Risk Impact Analysis
- Risk Mitigation

The entire job of risk management is sub-divided into three important steps described below in detail:

Risk Identification

Risk Identification is the simple identification process which lists out the probable factors that may disrupt the smooth functioning of the software. This listing process includes all possible instances, including external errors that might disrupt the functioning of the software. The most identified risks are late errors, lack of defined scopes, unavailability of independent test environment and work spaces, tight test schedule due to impending demand, etc. The identification process is a pre requirement often to ensure that the software has authenticity in the testing reports. The developers are also informed about the risk factors to avoid such loopholes in the future.

Risk Impact Analysis

Once the Risk is identified, we move on to Risk Impact analysis this step involves classification of the identified risks based on its probability and force of impact on the whole project. The three classifications for impact analysis are High, Medium and Low. There is a systematic structure followed to analyze the risk before it gets materialized. Impact analysis is also done financially as well, because the impact in that sector can have direct results on the development of the software. The major issues such as tight testing schedule and delay caused due to design issues could be a hindrance in a major

way, thus getting assigned to High category risk after Risk Impact analysis. An issue like the probability of natural disasters is classified as a low impact risk.

Risk Mitigation Process

The next is the most important step Risk Mitigation Process the idea is to find feasible solutions for the analyzed risk keeping high category risk mitigation as a priority. Finding the proper risk mitigation technique is also an important part. The techniques used should be harmless for the other stages of development. Mitigation if done successfully the chances for application gets drastically reduced. The risk mitigation factors include finding the most suitable solution that can be arranged in a limited time frame and thus not inducing a risk of delaying. For example the high risk factor of tight testing schedule, causing delay can be mitigated by informing the development and testing team to control preparation task in advance as a prevention system.

Test Execution

Risk management also sometimes extends to the test execution phase at times. Execution time risk management is a fast task to accomplish as it is constructed in a very short time frame, therefore, usually the impact analysis classifies the risk probability based on individual modules and rank them accordingly, thus making it easier for the testing team to mitigate the risk by prioritizing the module tests and finding solutions with the highest ranked module, thus saving a lot of time and energy.

Chapter-8-FUTURE SCOPE AND FURTHER ENHANCEMENT

Scope:

1. The system is highly flexible one and is well efficient to make easy interactions with the other users.
2. This will be a user-friendly one and can successfully overcome strict and severe validation checks.
3. The system will be a flexible to adopt any type of changes needed.

Further Enhancement:

1. The future system will be supporting the web percussive, feature that displays the web page on any device as per its dimensions.
2. Even for register users, the future system can be developed on a web application providing all the services same as the mobile application.

Chapter-7-CONCLUSION

The adhyapan is mainly used to share the views between the users of the application which is very useful to upgrade the knowledge of everyone. The application is also serve as a useful site to know what is going on and can also know about the various opportunities of the outer world. The application can be further expanded by following the future Enhancements mentioned above.

- The above features the detailing , description and facilities from adhyapan.
- the addition .deletion ,and modification of various details for various forms like user details , notes details, etc.
- this project are very user friendly , simple and easy , it aimed at overcoming the shortcoming of manually operated system.