“SMART-PAY”

Lab Project Report (PP)

For the award of the Degree of

Bachelor of Technology

in

INFORMATION TECHNOLOGY

By

K.ANIRUDH

(17311A1221)

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Under the Guidance / Supervision of

Mr.P SREEDHAR

Associate Professor

Department of Information Technology

Sreenidhi Institute of Science & Technology (Autonomous)

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DEPARTMENT OF INFORMATION TECHNOLOGY

SREENIDHI INSTITUTE OF SCIENCE & TECHNOLOGY

(AUTONOMOUS)

CERTIFICATE

This is to certify that the Lab project entitled **"SMART-PAY"**, submitted by **K.ANIRUDH** bearing roll no. **17311A1221** towards partial fulfillment for the award of Bachelor's Degree in Information Technology from Sreenidhi Institute of Science & Technology, Ghatkesar, Hyderabad, is a record of bonafide work done by him. The results embodied in the work are not submitted to any other University or Institute for award of any degree or diploma.

Mr. P SREEDHAR
Associate Professor

DR. BALARAM
HOD ,IT

DECLARATION

This is to certify that the work reported in the present PP Lab titled **"SMART-PAY"** is a record work done by me in the **Department of Information Technology, Sreenidhi Institute of Science and Technology, Yamnampet, Ghatkesar.**

The report is based on the project work done entirely by me and not copied from any other source.

K.ANIRUDH (17311A1221)

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ABSTRACT:

This project is designed to simulate credit card payment system. This web app created using Django stores the card information provided by the user and retieves the information while paying.

REQUIREMENTS:

Hardware:

- 64-bit/32-bit processor
- 4-GB/2-GB RAM
- HDD

Software:

- OS – UBUNTU 18.04 LTS
- Python3
- Django 2.2
- Web-browser

OVERVIEW OF DJANGO :

Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of Web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source.

Ridiculously fast.

> Django was designed to help developers take applications from concept to completion as quickly as possible.

Reassuringly secure.

> Django takes security seriously and helps developers avoid many common security mistakes.

Exceedingly scalable.

> Some of the busiest sites on the Web leverage Django's ability to quickly and flexibly scale.

Fully loaded.

> Django includes dozens of extras you can use to handle common Web development tasks. Django takes care of user authentication, content administration, site maps, RSS feeds, and many more tasks — right out of the box.

Incredibly versatile.

> Companies, organizations and governments have used Django to build all sorts of things — from content management systems to social networks to scientific computing platforms.

History of Django :

- **2003** − Started by Adrian Holovaty and Simon Willison as an internal project at the Lawrence Journal-World newspaper.
- **2005** − Released July 2005 and named it Django, after the jazz guitarist Django Reinhardt.
- **2005** − Mature enough to handle several high-traffic sites.
- **Current** − Django is now an open source project with contributors across the world.

Django – Design Philosophies :

Django comes with the following design philosophies −

- **Loosely Coupled** − Django aims to make each element of its stack independent of the others.
- **Less Coding** − Less code so in turn a quick development.
- **Don't Repeat Yourself (DRY)** − Everything should be developed only in exactly one place instead of repeating it again and again.
- **Fast Development** − Django's philosophy is to do all it can to facilitate hyper-fast development.
- **Clean Design** − Django strictly maintains a clean design throughout its own code and makes it easy to follow best web-development practices.

Advantages of Django :

Here are few advantages of using Django which can be listed out here −

- **Object-Relational Mapping (ORM) Support** − Django provides a bridge between the data model and the database engine, and supports a large set of database systems including MySQL, Oracle, Postgres, etc. Django also supports NoSQL database through Django-nonrel fork. For now, the only NoSQL databases supported are MongoDB and google app engine.
- **Multilingual Support** − Django supports multilingual websites through its built-in internationalization system. So you can develop your website, which would support multiple languages.
- **Framework Support** − Django has built-in support for Ajax, RSS, Caching and various other frameworks.
- **Administration GUI** − Django provides a nice ready-to-use user interface for administrative activities.
- **Development Environment** − Django comes with a lightweight web server to facilitate end-to-end application development and testing.

Sample Codes:

HTML:

1.Homepage:

```
<h1> Welcome to
Smart-Pay
App:</h1>

                <hr>
                <p style="color:blue;font-family:calibri;font-size:25px;">Hello ..!
                Mr. AK</p>
                <p>Welcome to your secure payment gateway.<p>
                <br>
                <p> How would you like to pay ?</p>
                <a href="addpay">
                        <button>Add and pay </button>
                </a>
                <a href="existpay">
                        <button>Pay with Existing</button>
                </a>
```

2.Form:

```
<h2>Please Enter
your debit-card
details....</h2>

                <form action="onaddpay" method="post">
                        {% csrf_token %}
                        <fieldset>
                        <legend>Card-Details:</legend>
                        Card-number:
                        <input type="text" name="cardno"><br>
                        Card-Holder name:
                        <input type="text" name="cardholdername"><br>
                        Valid-thru:
                        <input type="text" name="validthru"><br>
                        CVV:
                        <input type="password" name="cvv" maxlength="3"><br>
                        <input type="submit" value="Add & pay">
                        </fieldset>
                </form>
```

VIEWS:

```
from
django.s
hortcuts
import
render
            from django.http import HttpResponse
            from payment.models import CDetails


            # Create your views here.
            def home(request):
                    return render(request,'home.html')
            def addpay(request):
                    return render(request,'addpay.html')
            def onaddpay(request):
                    c=CDetails(request.POST['cardno'],request.POST['cardno'],request.POST
            ['cardholdername'],request.POST['validthru'],request.POST['cvv'])
                    c.save()
                    return render(request,'success.html',{'msg':'Payment SUCCESSFULLY
            completed with the addded card'})
            def existpay(request):
                    c=CDetails.objects.all()
                    return render(request,'existpay.html',{'cards':c})
            def final(request):
                    return render(request,'success.html',{'msg':'Payment SUCCESSFULLY
            completed with the selected card'})
```

Urls:

```
        from
        django.urls
        import path
                    from . import views


                    urlpatterns = [


                    path('',views.home,name='home'),
                    path('addpay/',views.addpay),
                    path('existpay/',views.existpay),
                    path('addpay/onaddpay',views.onaddpay),
                    path('existpay/success',views.final),]
```

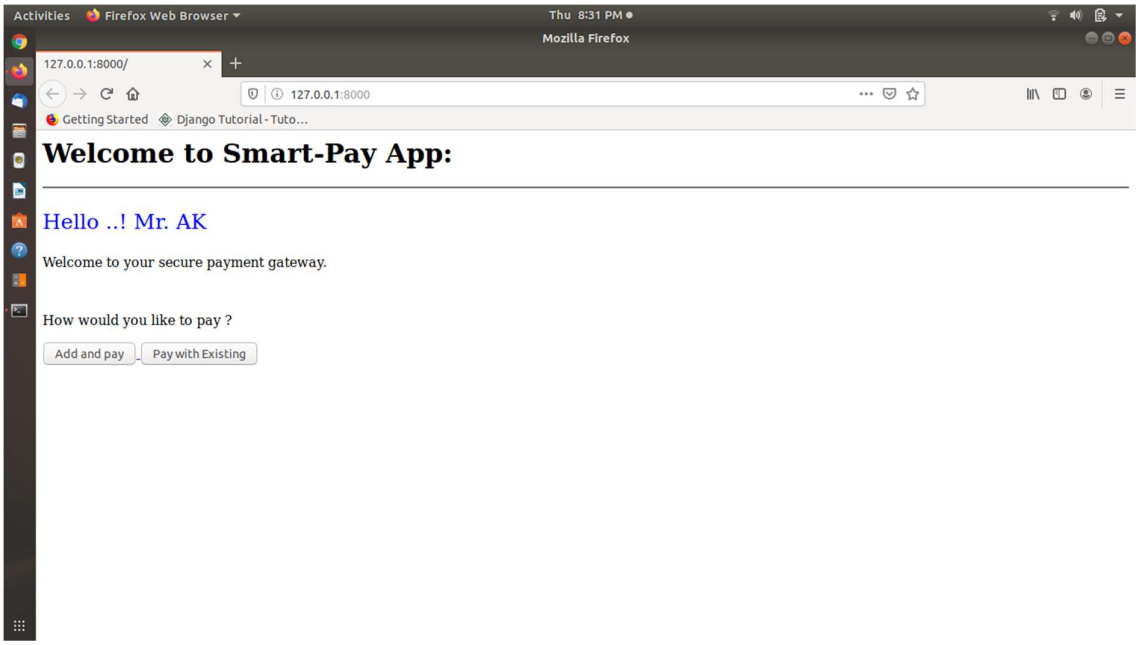
]

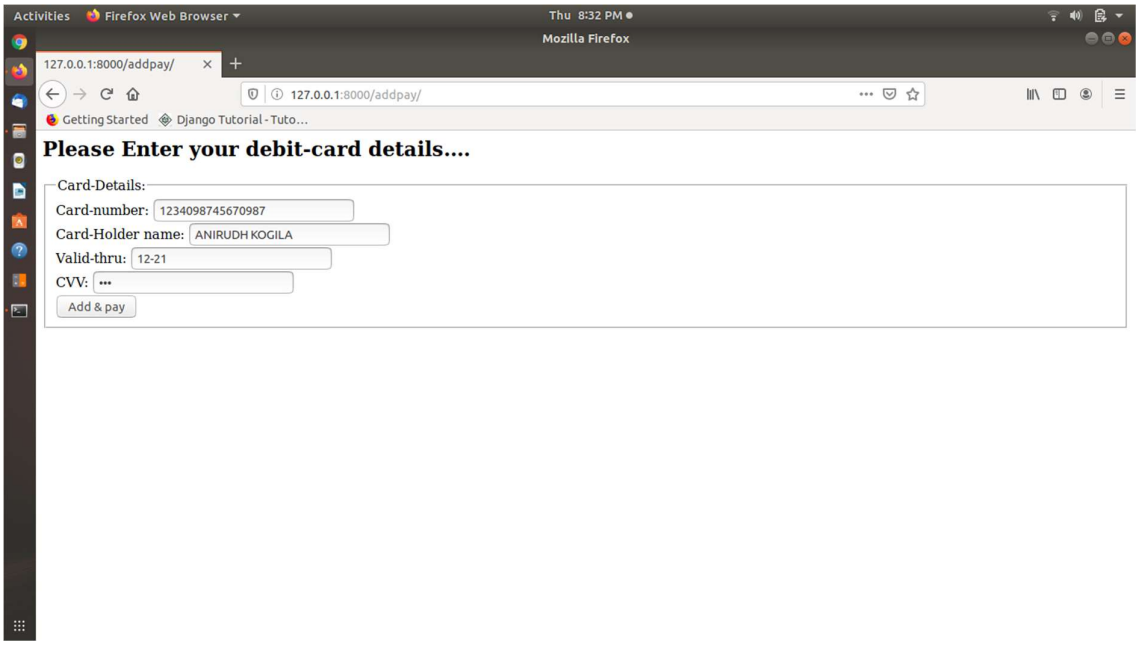
Models:

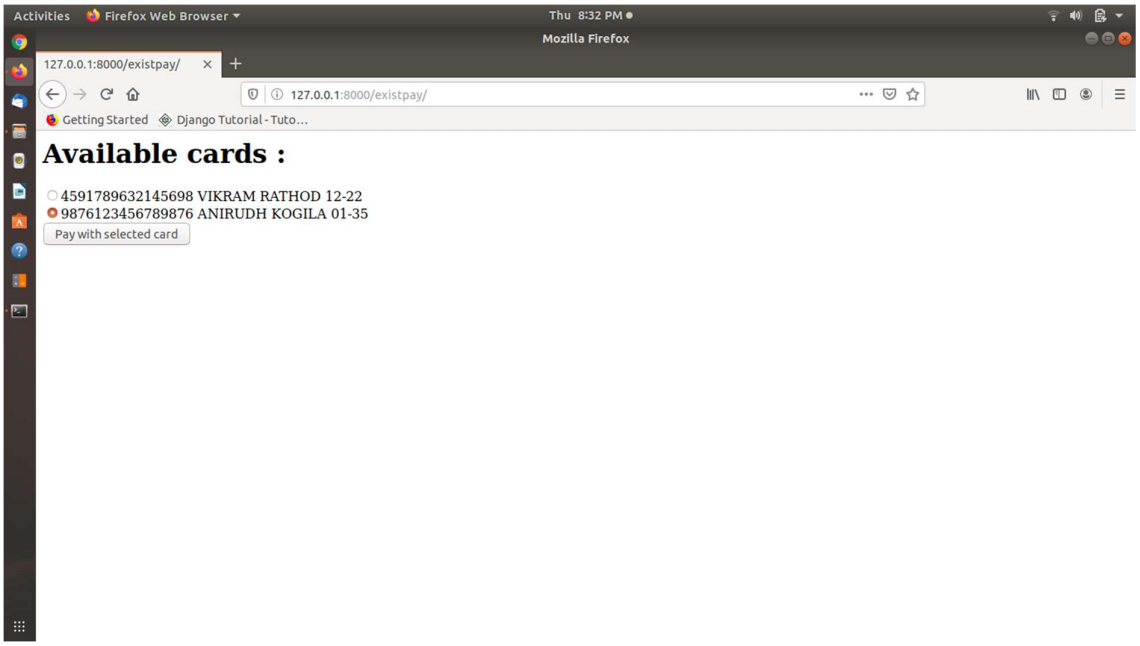
```
from
django.db
import
models


# Create your models here.
class CDetails(models.Model):
        cardno = models.CharField(max_length=20)
        holdername = models.CharField(max_length=20)
        validthru = models.CharField(max_length=20)
        cvv = models.CharField(max_length=20)
```

Output :




Activities
Firefox Web Browser
Thu 8:32 PM
Mozilla Firefox
127.0.0.1:8000/addpay/
127.0.0.1:8000/addpay/
Getting Started
Django Tutorial - Tuto...
Please Enter your debit-card details....
Card-Details:
Card-number: 1234098745670987
Card-Holder name: ANIRUDH KOGILA
Valid-thru: 12-21
CVV: •••
Add & pay


Activities
Firefox Web Browser
Thu 8:32 PM
Mozilla Firefox
127.0.0.1:8000/existpay/
127.0.0.1:8000/existpay/
Getting Started
Django Tutorial - Tuto...
Available cards :
4591789632145698 VIKRAM RATHOD 12-22
9876123456789876 ANIRUDH KOGILA 01-35
Pay with selected card