



AADHAAR
HACKATHON 2021

Solution By: TEAM CARBIDE
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Team Leader Name: CHIRAG PATEL

GIT REPOSITORY:-<https://github.com/singhdivyank42/TEAM-CARBIDE-UIDAI-Hackathon-2021>



Team Slide

AADHAAR HACKATHON 2021



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Theme 2: Authentication Reimagined

GIT REPO-: <https://github.com/singhdivyank42/TEAM-CARBIDE-UIDAI-Hackathon-2021>



Authentication Application :

- A Real world application using UIDAI's authentication services
- Authentication of individual without disclosing AADHAR NUMBER.
- Consist of Resident(user's device) and Verifier(Authority) application with smooth UI experience.

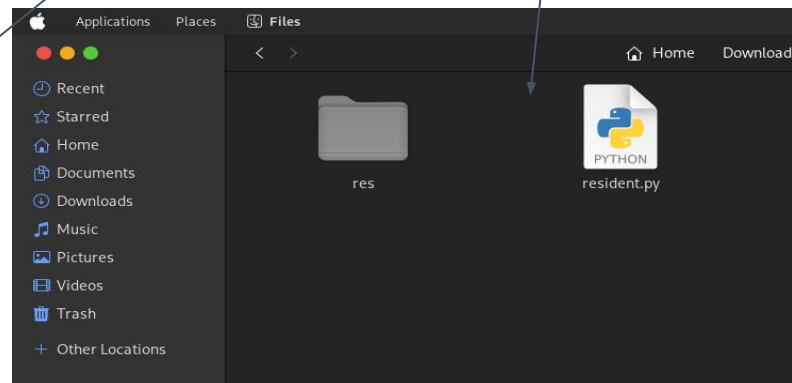
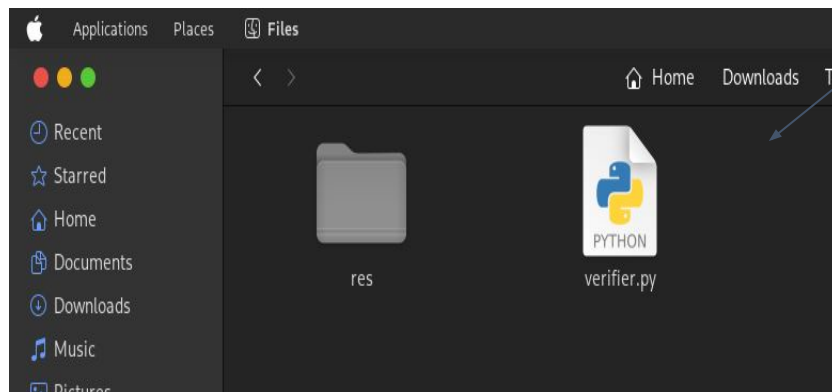
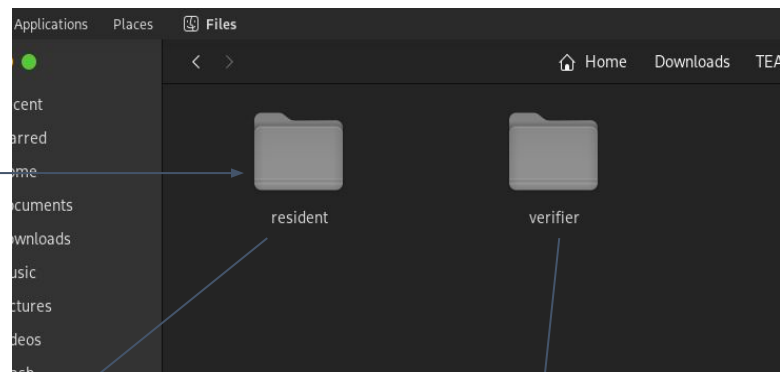
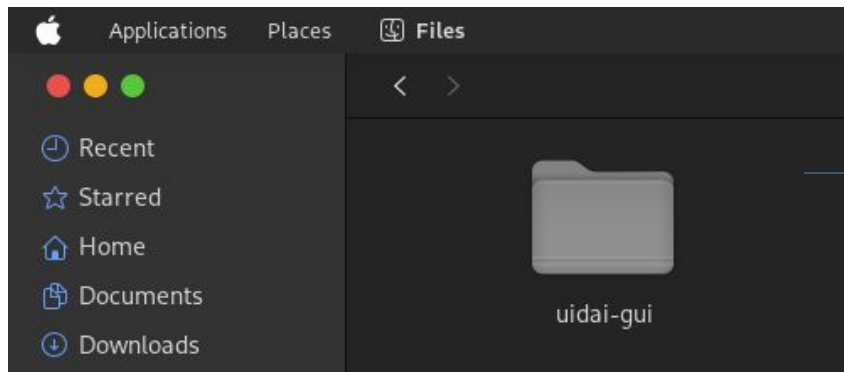


TOOLS AND TECHNOLOGIES :



1. Python (backend and frontend (tkinter))
2. Aadhar authentication API

SCREENSHOTS :



SCREENSHOTS :

```
Applications Places Text Editor Sun Oct 31 19:57:34
resident.py
~/Downloads/TEAM-CARBIDE-UIDAI-Hackathon-2021/uidai-gui/resident

1 from tkinter import *
2 from tkinter import simpledialog
3 import requests
4 import json
5 import uuid
6 import base64
7 import tempfile
8 import hashlib
9 from PIL import Image, ImageTk
10 from cryptography.fernet import Fernet
11
12 def genCap(canvas, status, capt):
13     global ret
14     global cap
15
16     url = 'https://stag1.uidai.gov.in/unifiedAppAuthService/api/v2/get/captcha'
17     headers = {
18         'Content-Type': 'application/json'
19     }
20     data = {
21         'langCode': 'en',
22         'captchaLength': '3',
23         'captchaType': '2'
24     }
```

```
25 response = requests.post(url=url, data=json.dumps(data), headers=headers)
26 jsonData = json.loads(response.text)
27
28 if jsonData and jsonData['status'] == 'Success':
29     temp = tempfile.TemporaryFile()
30     temp.write(base64.b64decode(jsonData['captchaBase64String']))
31     img = Image.open(temp)
32     img = img.resize((150, 50))
33     cap = ImageTk.PhotoImage(img)
34     canvas.itemconfigure(capt, image = cap)
35
36     ret = [True, jsonData['captchaTxnId']]
37
38 else:
39     ret = [False]
40     canvas.itemconfigure(status, text = "Captcha Generation Error", fill="#d32f28")
41
42 def fetchKyc(canvas, otp, scode, uid, fn, ln, m):
43     url = 'https://stag1.uidai.gov.in/eAadhaarService/api/downloadOfflineKyc'
44     if ret[0] == True:
45         txnNum = ret[1]
46     else:
47         txnNum = ""
48
49     headers = {
50         'Content-Type': 'application/json'
51     }
52     data = {
53         "txnNumber": txnNum,
54         "otp": otp,
55         "shareCode": scode,
```

```
Applications Places Text Editor Sun Oct 31 19:58:19
verify.py
~/Downloads/TEAM-CARBIDE-UIDAI-Hackathon-2021/uidai-gui/verify

1 from tkinter import *
2 from tkinter import filedialog
3 import hashlib
4 import base64
5 import json
6 import tempfile
7 import zipfile
8 from uuid import uuid4
9 from cryptography.fernet import Fernet
10 from signal import signal, SIGINT
11 from PIL import Image, ImageTk
12
13 def browse(canvas, filip):
14     global kycPath
15     kycPath = filedialog.askopenfilename()
16     if not kycPath:
17         canvas.itemconfigure(filip, text = kycPath)
18     else:
19         canvas.itemconfigure(filip, text = kycPath[-10:])
20
21 def delentry(name, dob, gender):
22     name.config(state = "normal")
23     name.delete(1, END)
24     name.config(state = "disabled")
25
26     gender.config(state = "normal")
27     gender.delete(1, END)
28     gender.config(state = "disabled")
29
30     dob.config(state = "normal")
31     dob.delete(1, END)
32     dob.config(state = "disabled")
33
34
35 def verify(canvas, name, status, dob, gender, face, code):
36     delentry(name, dob, gender)
37
38     global kycPath
39     global face_img
40
41     key = hashlib.md5(code.encode()).hexdigest()
42     key = base64.urlsafe_b64decode(key.encode())
43     deckyc = Fernet(key).decrypt(open(kycPath, 'rb').read())
44
45     except Exception as e:
46         canvas.itemconfigure(status, text = "WRONG CODE", fill="#d32f28")
47
48     deckyc = json.loads(deckyc)
49
50     kycZip = deckyc['kycZip']
51     temp = tempfile.TemporaryFile()
52     temp.write(base64.b64decode(kycZip))
53     with zipfile.ZipFile(temp, 'r') as f:
54         kyc = f.open(name = f'libname[1st]')[-1].mode = 'r').read().encode()
```

SCREENSHOTS :



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RESIDENT APP

Applications Places Tk Sun Oct 31 20:00:41

inflection@INFLECTION:~/Downloads/TEAM-CARBIDE-UIDAI

```
[inflection@INFLECTION ~]$ cd Downloads
[inflection@INFLECTION Downloads]$ cd TEAM-CARBIDE-UIDAI-Hackathon-2021/
[inflection@INFLECTION TEAM-CARBIDE-UIDAI-Hackathon-2021]$ cd uidai-gui/
[inflection@INFLECTION uidai-gui]$ cd resident
[inflection@INFLECTION resident]$ python resident.py
```

Resident App

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AADHAAR

FIRST NAME

LAST NAME

UID

CONTACT NO.

SECRET CODE

BK_DT_HY

CAPTCHA

GET OTP

Enter Data As Per Your Aadhar

Applications Places Tk Sun Oct 31 20:02:26

inflection@INFLECTION:~/Downloads/TEAM-CARBIDE-UIDAI

```
[inflection@INFLECTION ~]$ cd Downloads
[inflection@INFLECTION Downloads]$ cd TEAM-CARBIDE-UIDAI-Hackathon-2021/
[inflection@INFLECTION TEAM-CARBIDE-UIDAI-Hackathon-2021]$ cd uidai-gui/
[inflection@INFLECTION uidai-gui]$ cd resident
[inflection@INFLECTION resident]$ python resident.py
```

Resident App

AADHAR HACKATHON 2021

AADHAAR

FIRST NAME

LAST NAME

UID

CONTACT NO.

SECRET CODE

BK_DT_HY

CAPTCHA

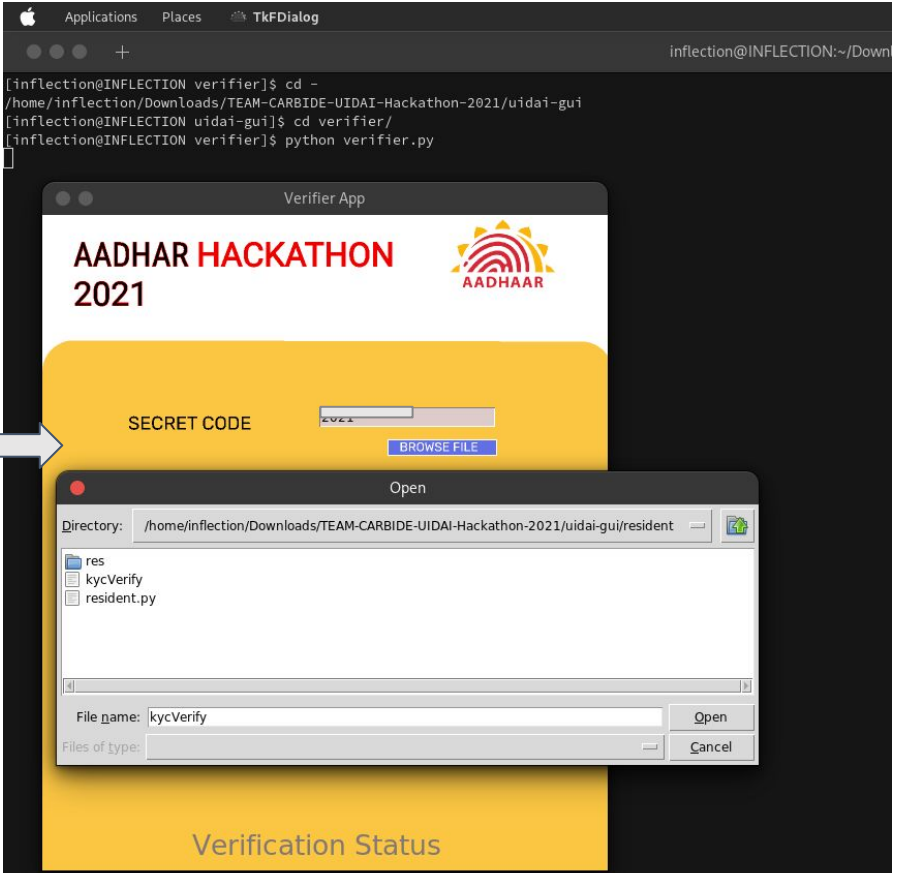
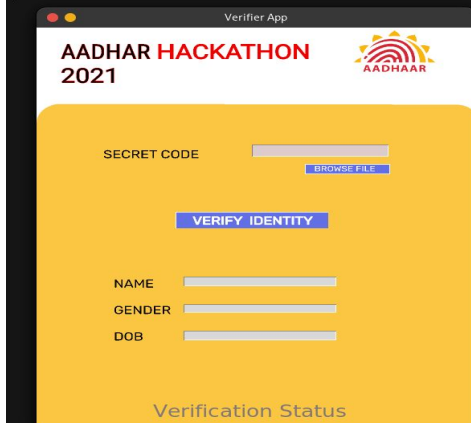
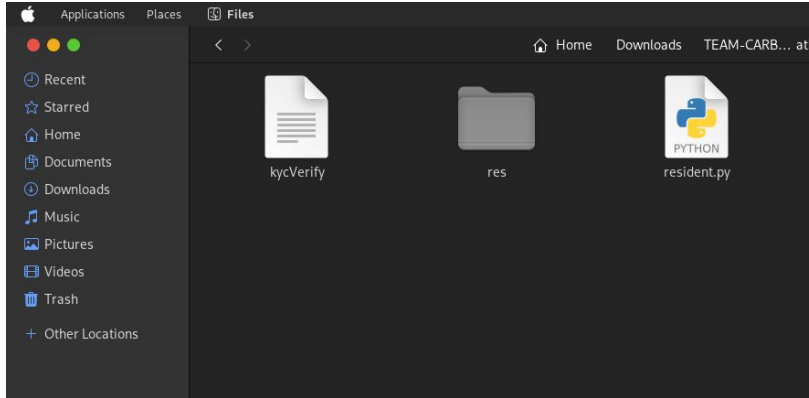
GET OTP

"kycVerify" generated

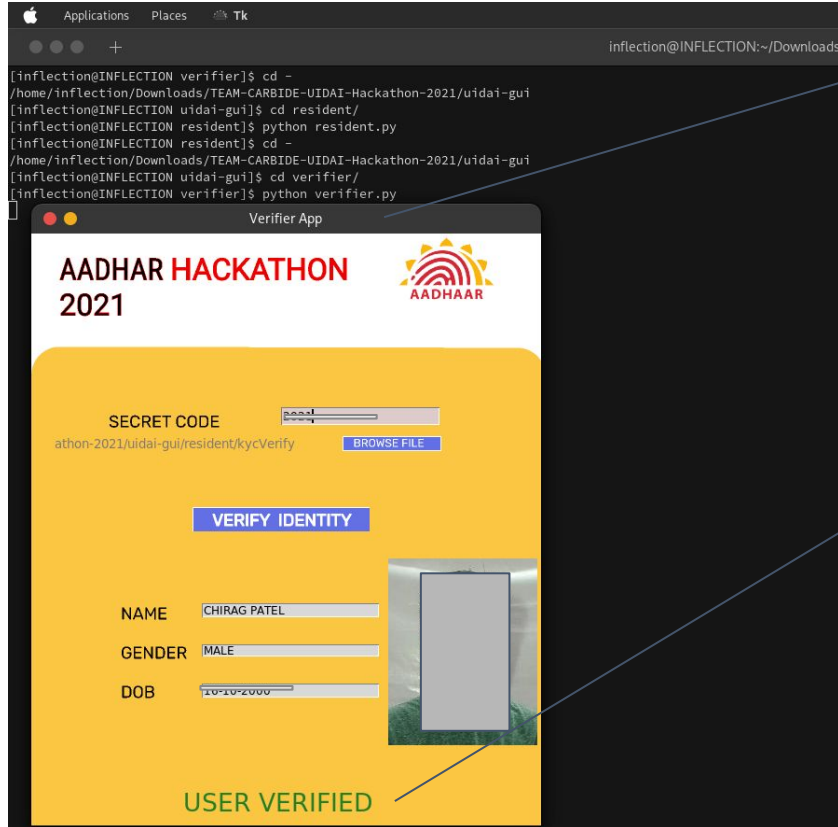
SCREENSHOTS :



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SCREENSHOTS :



VERIFIER APP

USER VERIFIED

Indicates that user's KYC matches with the data input by user without using internet and without disclosing aadhar number .



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THANK YOU !