



# ***Python Development***

***Internship***

**2020-21**

# ConsoleLancer



**Internship Project Report**

**ON**

**Data Augmentation**

**Session :- 2020-21**

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**Submitted to:**

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Mr. Shubham Tandon,  
Managing Director, ConsoleLancer

# Certificate

This is to certify that Mustafa Hasan (TL),

Rajat Kaliya, Kartik Sharma, Kapil

Dev Sharma,

Ashu Hasan has satisfactorily completed  
the project work entitled

**“Data Augmentation”**

And

Prepared this project during the academic year  
2020-2021. In partial fulfillment for the award of  
ConsoleLancer. Recognized by  
ConsoleLancer, Bangalore. It is further certified  
that they completed all required phases of the  
project.

Project Guide

Managing Director

## Acknowledgement

We articulate our sincere gratitude to all those who helped us in making this venture a grand success, without whose constructive criticism as well as words of inspiration this project of ours would not have seen the light.

We take this opportunity to thank Mr. SHOUHADDO PAUL, for the knowledge and guidance provided to us on the project work. We gratefully thank them for extending to us their invaluable time and resources.

We would also like to mention our sincere gratitude to Mr.SHUBHAM TANDON, Managing Director, ConsoleLancer, for giving us opportunity to work in this project at ConsoleLancer

Mustafa Hasan (TL),  
Rajat Kaliya, Kartik Sharma,  
Kapil Dev Sharma,  
Ashu Hasan

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## **Data augmentation**

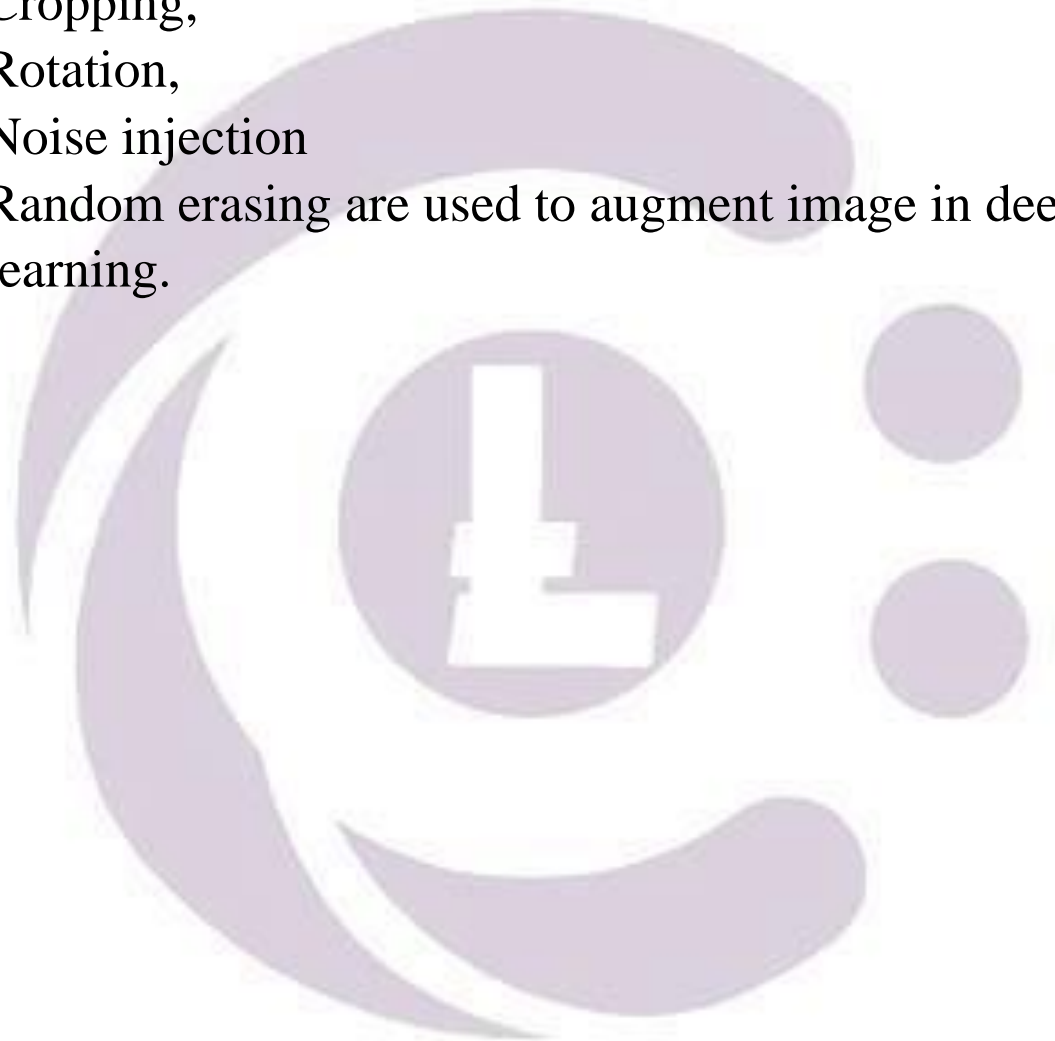
**Data augmentation** in data analysis are techniques used to increase the amount of data by adding slightly modified copies of already existing data or newly created synthetic data from existing data. It acts as a regularizer and helps reduce overfitting when training a machine learning model. It is closely related to oversampling in data analysis.

**Data augmentation** is a strategy that enables practitioners to significantly increase the diversity of **data** available for training models, without actually collecting new **data**. **Data augmentation** techniques such as cropping, padding, and horizontal flipping are commonly used to train large neural networks.

**Data augmentation** can be used to increased the accuracy and learning of the model because by using Data augmentation we can create several images of same image in different perspective like by flipping, rotating, sharpening and many more so that same image can be train in multiple ways and model can easily predict the image by so much learning .

## **Transformation of images**

- Geometric transformations,
- Flipping,
- Color modification,
- Cropping,
- Rotation,
- Noise injection
- Random erasing are used to augment image in deep learning.



## **Tkinter**

The tkinter package (“Tk interface”) is the standard Python interface to the Tk GUI toolkit. Both Tk and tkinter are available on most Unix platforms, as well as on Windows systems. (Tk itself is not part of Python; it is maintained at ActiveState.) Running `python -m tkinter` from the command line should open a window demonstrating a simple Tk interface, letting you know that tkinter is properly installed on your system, and also showing what version of Tcl/Tk is installed, so you can read the Tcl/Tk documentation specific to that version.

## **Tkinter modules**

**Tkinter Modules** Most of the time, tkinter is all you really need, but a number of additional modules are available as well. The Tk interface is located in a binary module named `tkinter`. This module contains the lowlevel interface to Tk, and should never be used directly by application programmers. It usually a shared library (or DLL), but might in some cases be statically linked with the Python interpreter. In addition to the Tk interface module, tkinter includes a number of Python modules, `tkinter.constants` being one of the most important. Importing `tkinter` will automatically import `tkinter.constants`, so, usually, to use Tkinter all you need is a simple import statement

## **The Packer**

The packer is one of Tk’s geometry-management mechanisms. Geometry managers are used to specify the relative positioning of widgets within their container - their mutual master. In contrast to the more cumbersome placer (which is used less commonly, and we do not cover here), the packer takes qualitative relationship specification - above, to the left of, filling, etc - and works everything out to determine the exact placement coordinates for you. The size of any master widget is determined by the size of the “slave widgets” inside. The packer is used to control where slave widgets appear



inside the master into which they are packed. You can pack widgets into frames, and frames into other frames, in order to achieve the kind of layout you desire. Additionally, the arrangement is dynamically adjusted to accommodate incremental changes to the configuration, once it is packed. Note that widgets do not appear until they have had their geometry specified with a geometry manager. It's a common early mistake to leave out the geometry specification, and then be surprised when the widget is created but nothing appears. A widget will appear only after it has had, for example, the packer's pack() method applied to it. The pack() method can be called with keyword-option/value pairs that control where the widget is to appear within its container, and how it is to behave when the main application window is resized.

## Tk Option Data Types

### *Anchor*

Legal values are points of the compass: "n", "ne", "e", "se", "s", "sw", "w", "nw", and also "center"

### *Bitmap*

There are eight built-in, named bitmaps: 'error', 'gray25', 'gray50', 'hourglass', 'info', 'questhead', 'question', 'warning'. To specify an X bitmap filename, give the full path to the file, preceded with an @, as in "@usr/contrib/bitmap/gumby.bit".

### *Boolean*

You can pass integers 0 or 1 or the strings "yes" or "no".

### *callback*

This is any Python function that takes no arguments

### *Color*

Colors can be given as the names of X colors in the rgb.txt file, or as strings representing RGB values in 4 bit: "#RGB", 8 bit: "#RRGGBB", 12 bit: "#RRRGGGBBB", or 16 bit: "#RRRRGGGGBBBB" ranges, where R,G,B here represent any legal hex digit. See page 160 of Ousterhout's book for details.

### *cursor*

The standard X cursor names from `cursorfont.h` can be used, without the XC prefix. For example to get a hand cursor (XC hand2), use the string "hand2". You can also specify a bitmap and mask file of your own. See page 179 of Ousterhout's book.

### *Distance*

Screen distances can be specified in either pixels or absolute distances. Pixels are given as numbers and absolute distances as strings, with the trailing character denoting 9 units: c for centimetres, i for inches, m for millimetres, p for printer's points. For example, 3.5 inches is expressed as "3.5i"

### *font*

Tk uses a list font name format, such as {courier 10 bold}. Font sizes with positive numbers are measured in points; sizes with negative numbers are measured in pixels.

### *Geometry*

This is a string of the form widthxheight, where width and height are measured in pixels for most widgets (in characters for widgets displaying text). For example: `fred["geometry"] = "200x100"`.

### *Justify*

Legal values are the strings: "left", "center", "right", and "fill".

### *Region*

This is a string with four space-delimited elements, each of which is a legal distance (see above). For example: "2 3 4 5" and "3i 2i 4.5i 2i" and "3c 2c 4c 10.43c" are all legal regions.

### *Relief*

Determines what the border style of a widget will be. Legal values are: "raised", "sunken", "flat", "groove", and "ridge".

### *Scrollcommand*

This is almost always the `set()` method of some scrollbar widget, but can be any widget method that takes a single argument.

### *Wrap*

Must be one of: "none", "char", or "word".

## OPENCV

OpenCV was started at Intel in 1999 by **Gary Bradsky**, and the first release came out in 2000. **Vadim Pisarevsky** joined Gary Bradsky to manage Intel's Russian software OpenCV team. In 2005, OpenCV was used on Stanley, the vehicle that won the 2005 DARPA Grand Challenge. Later, its active development continued under the support of Willow Garage with Gary Bradsky and Vadim Pisarevsky leading the project. OpenCV now supports a multitude of algorithms related to Computer Vision and Machine Learning and is expanding day by day.

OpenCV supports a wide variety of programming languages such as C++, Python, Java, etc., and is available on different platforms including Windows, Linux, OS X, Android, and iOS. Interfaces for high-speed GPU operations based on CUDA and OpenCL are also under active development.

OpenCV-Python is the Python API for OpenCV, combining the best qualities of the OpenCV C++ API and the Python language

## OPENCV PYTHON

OpenCV-Python is a library of Python bindings designed to solve computer vision problems.

Python is a general purpose programming language started by **Guido van Rossum** that became very popular very quickly, mainly because of its simplicity and code readability. It enables the programmer to express ideas in fewer lines of code without reducing readability.

Compared to languages like C/C++, Python is slower. That said, Python can be easily extended with C/C++, which allows us to write computationally intensive code in C/C++ and create Python wrappers that can be used as Python modules. This gives us two advantages: first, the code is as fast as the original C/C++ code (since it is the actual C++ code working in background) and second, it easier to code in Python than C/C++. OpenCV-Python is a Python wrapper for the original OpenCV C++ implementation.

OpenCV-Python makes use of **Numpy**, which is a highly optimized library for numerical operations with a MATLAB-style syntax. All the OpenCV array structures are converted to and from Numpy arrays. This also makes it easier to integrate with other libraries that use Numpy such as SciPy and Matplotlib.

## Skimage

What's the first thing that comes to your mind when you hear "image preprocessing"? I received a few quizzical looks when I asked this question to a group of data science enthusiasts. If you're wondering what this is, read on! We're pretty familiar with the preprocessing steps for structured (tabular) data. You find and plug in any missing values, detect and deal with outliers, etc. This helps us build better and more robust machine learning models. But how does that work when we're working with image data?

As it turns out, the preprocessing step is a crucial one in the world of computer vision (images, videos, and so on). `skimage`, part of the `scikit-learn` family, is a really helpful library to get us started.

*Scikit-image, or `skimage`, is an open source Python package designed for image preprocessing.*

# Numpy

NumPy is a general-purpose array-processing package. It provides a highperformance multidimensional array object, and tools for working with these arrays.

It is the fundamental package for scientific computing with Python. It contains various features including these important ones:

- A powerful N-dimensional array object
  - Sophisticated (broadcasting) functions
  - Tools for integrating C/C++ and Fortran code
  - Useful linear algebra, Fourier transform, and random number capabilities
- Besides its obvious scientific uses, NumPy can also be used as an efficient multidimensional container of generic data.

Arbitrary data-types can be defined using Numpy which allows NumPy to seamlessly and speedily integrate with a wide variety of databases.

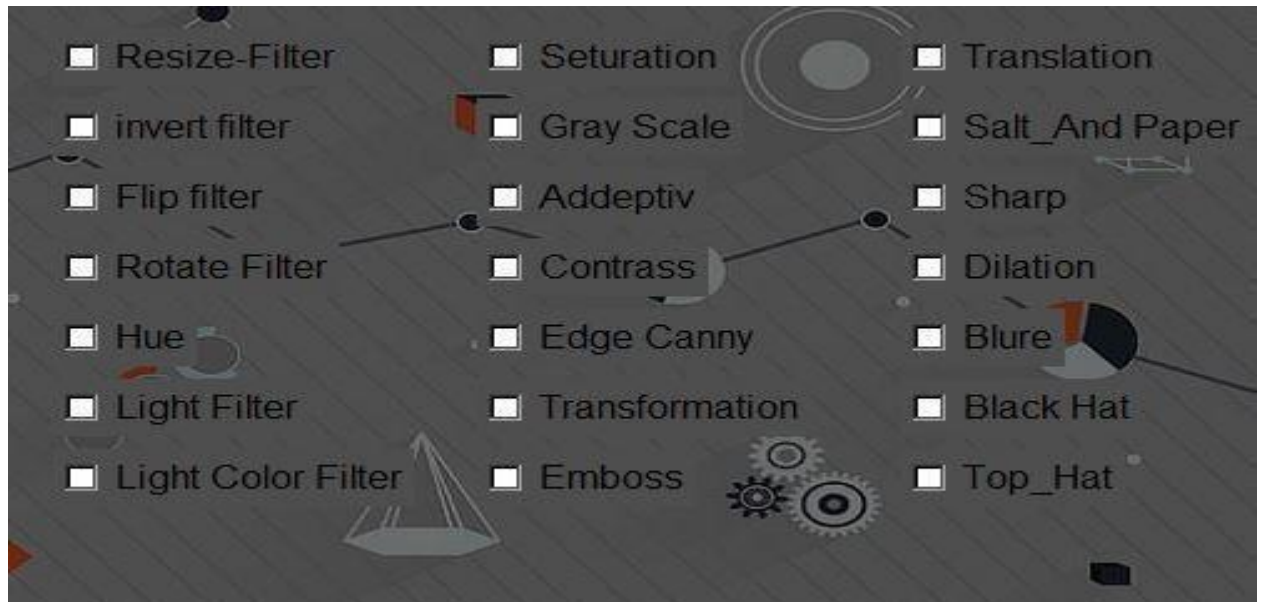
# Filters

we are using so many filters in this software these are namely given below:-

- Resize Image
- Crop Image
- Padding Image
- Flip Image
- Superpixel Image
- Segment Colorfulness
- Invert Image
- Add Light
- Add Light Color
- Saturation Image
- Hue Image
- Multiply Image
- Gaussian Blur
- Averaging Blur
- Median Blur
- Bilateralblur
- Erosion Image
- Dilation Image
- Opening Image
- Closing Image
- Morphological Gradient Image
- Top Hat Image
- Black Hat Image
- Sharpen Image
- Emboss Image
- Edge Image
- Adaptive Gaussian Noise
- Salt Image
- Paper Image
- Salt And Paper Image
- Contrast Image
- Edge Detect Canny Image
- Grayscale Image
- Scale Image
- Translation Image



- Rotate Image
- Transformation Image



## My sql

[MySQL](#) is one of the most popular [database management systems \(DBMSs\)](#) on the market today. It ranked second only to the [Oracle DBMS](#) in this year's [DBEngines Ranking](#). As most software applications need to interact with data in some form, programming languages like Python provide tools for storing and accessing these data sources.

Using the techniques discussed in this tutorial, you'll be able to efficiently integrate a MySQL database with a Python application. You'll develop a small MySQL database for a movie rating system and learn how to query it directly from your Python code.

- Identify unique features of **MySQL**
- **Connect your application** to a MySQL database
- Query the database to **fetch required data**
- **Handle exceptions** that occur while accessing the database . Use **best practices** while building database applications

To get the most out of this tutorial, you should have a working knowledge of Python concepts like [for loops](#), [functions](#), [exception handling](#), and installing Python packages using [pip](#). You should also have a basic understanding of relational database management systems and SQL queries like SELECT, DROP, CREATE, and JOIN.



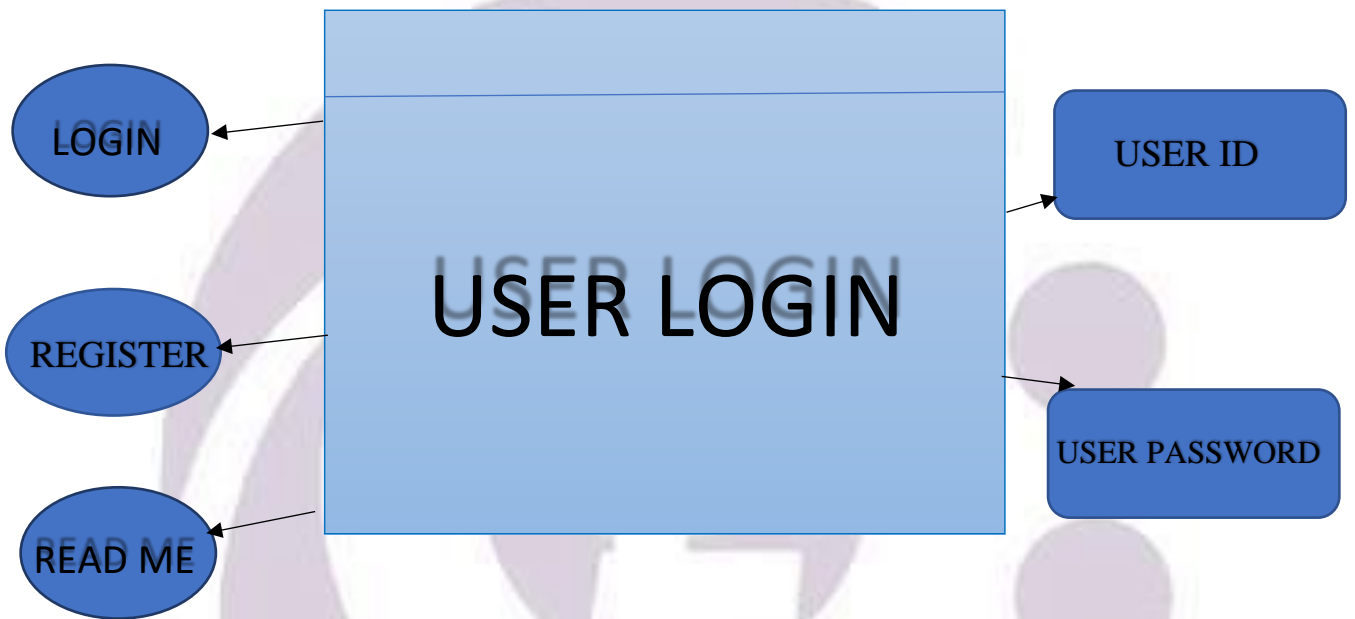
Options

</

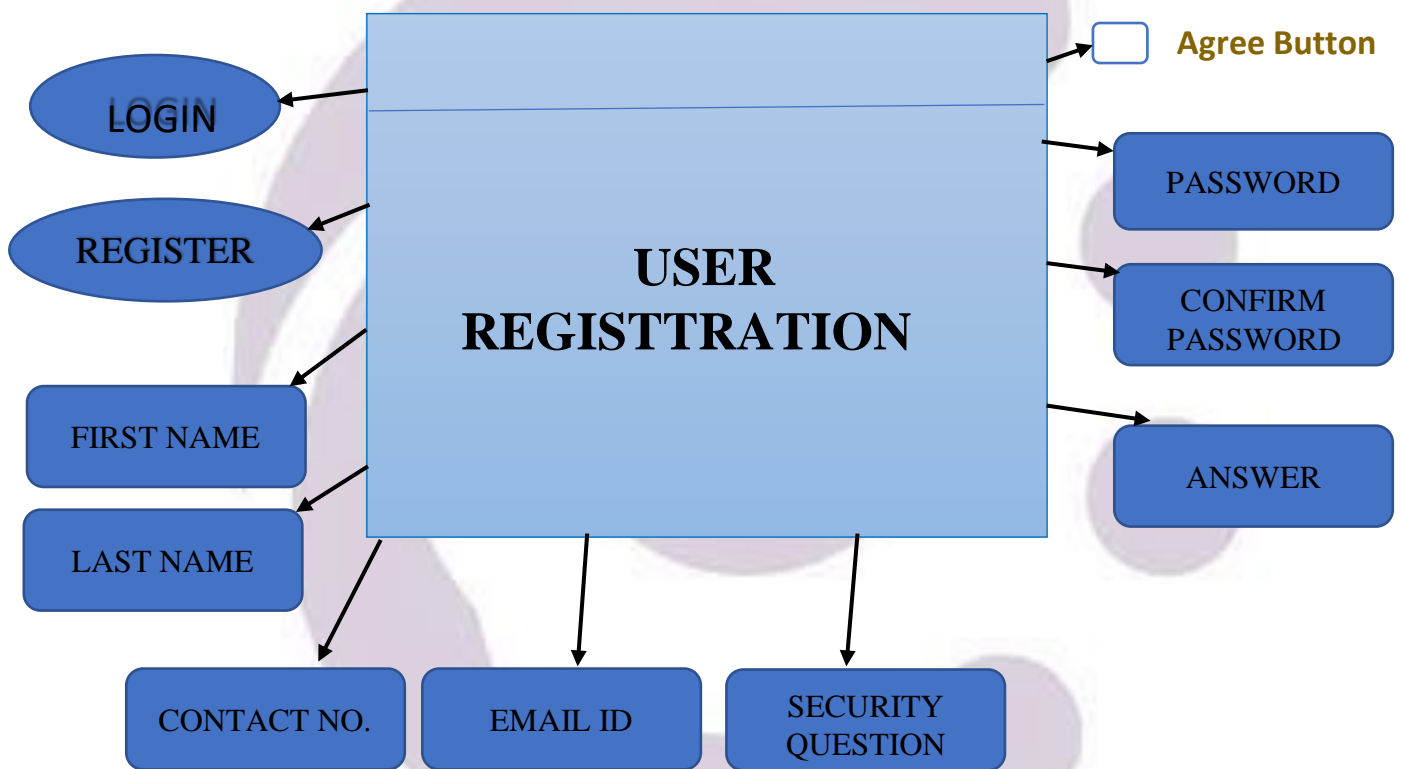


# USER PHASE

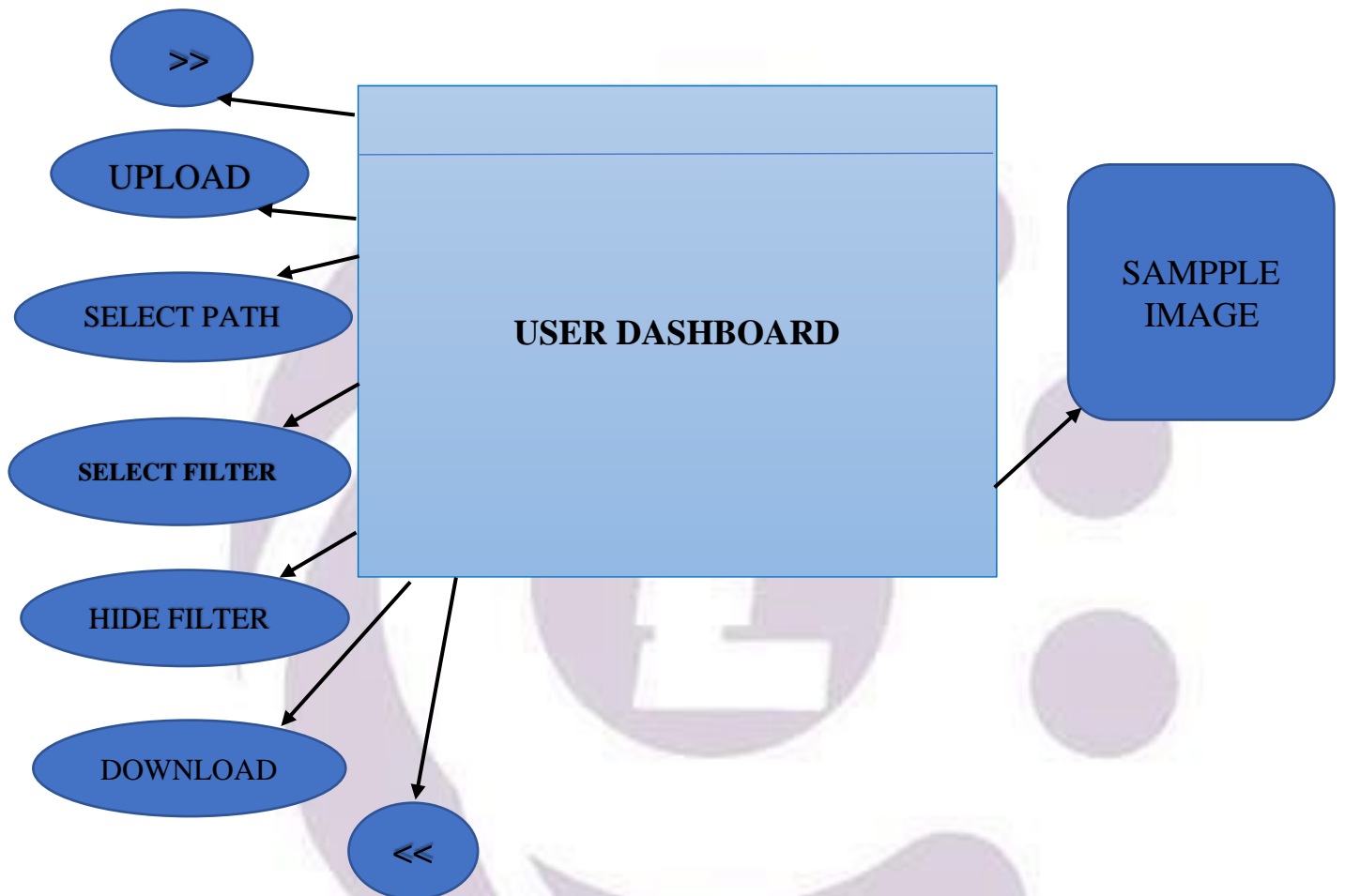
## 1.WINDOW



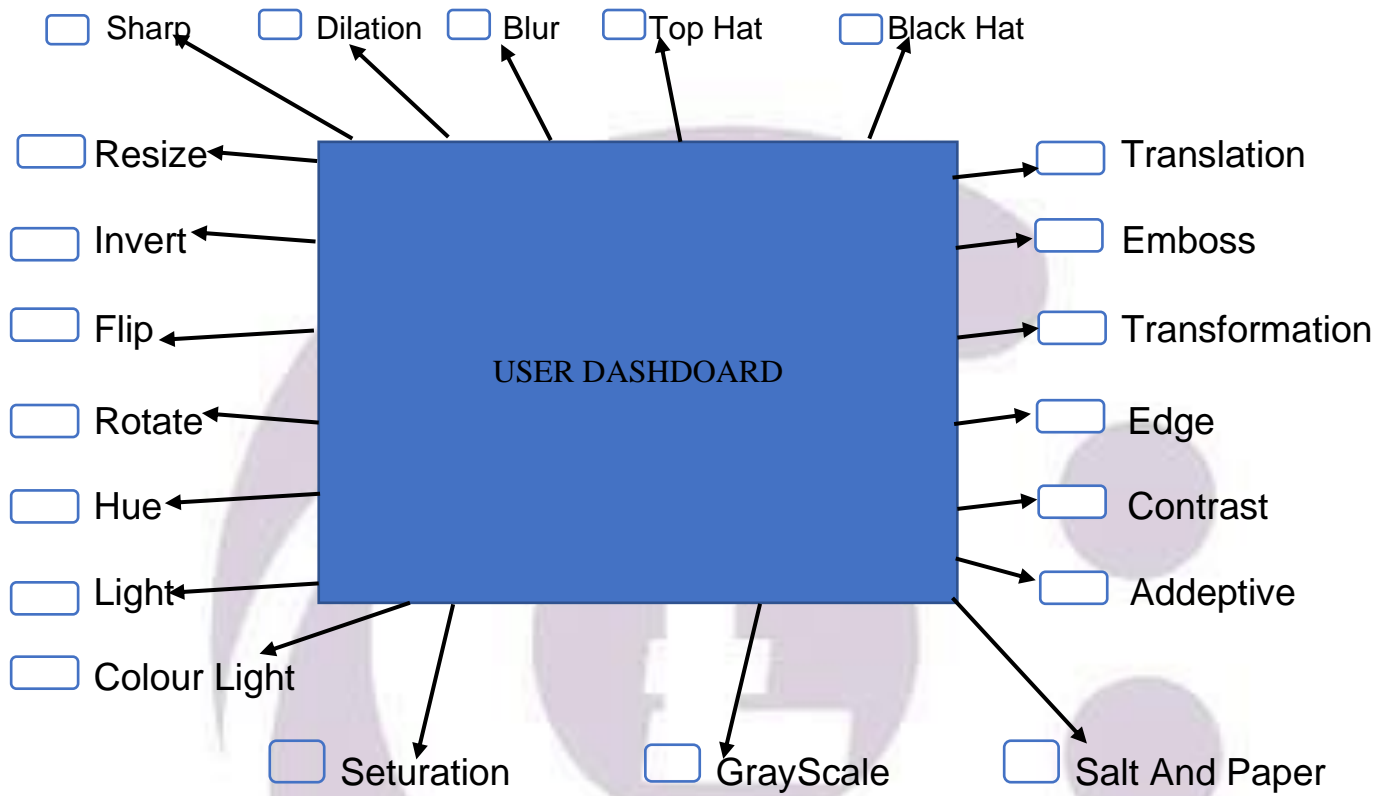
## 2.WINDOW



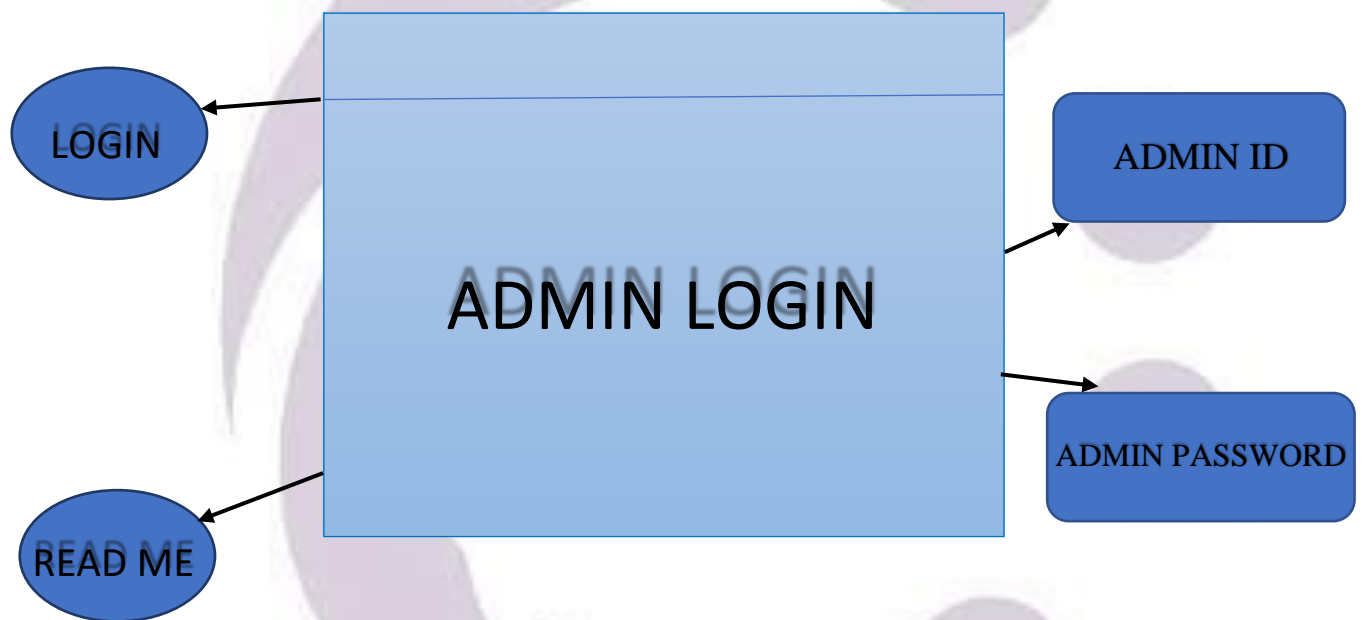
### 3.WINDOW



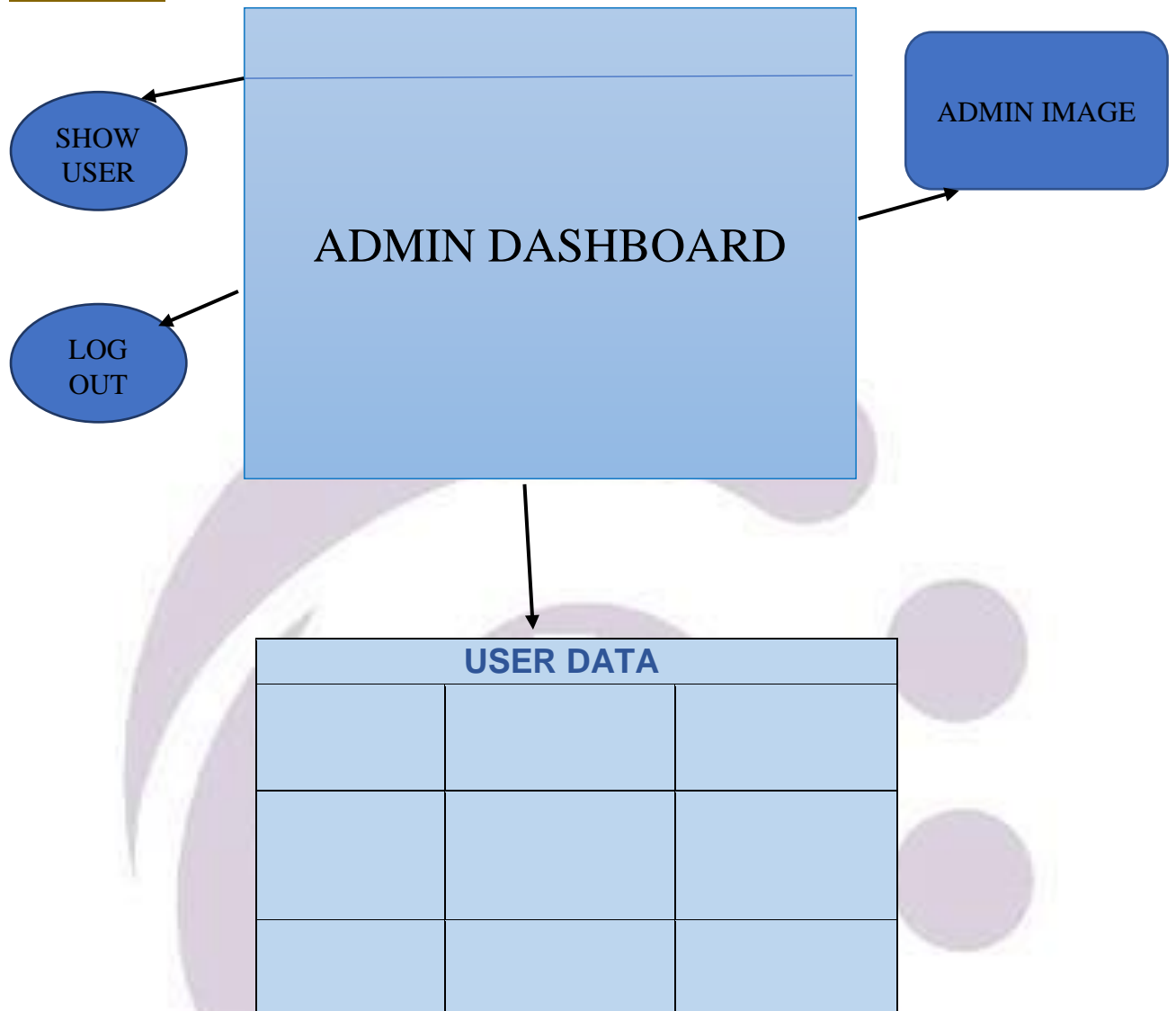
#### 4.WINDOW



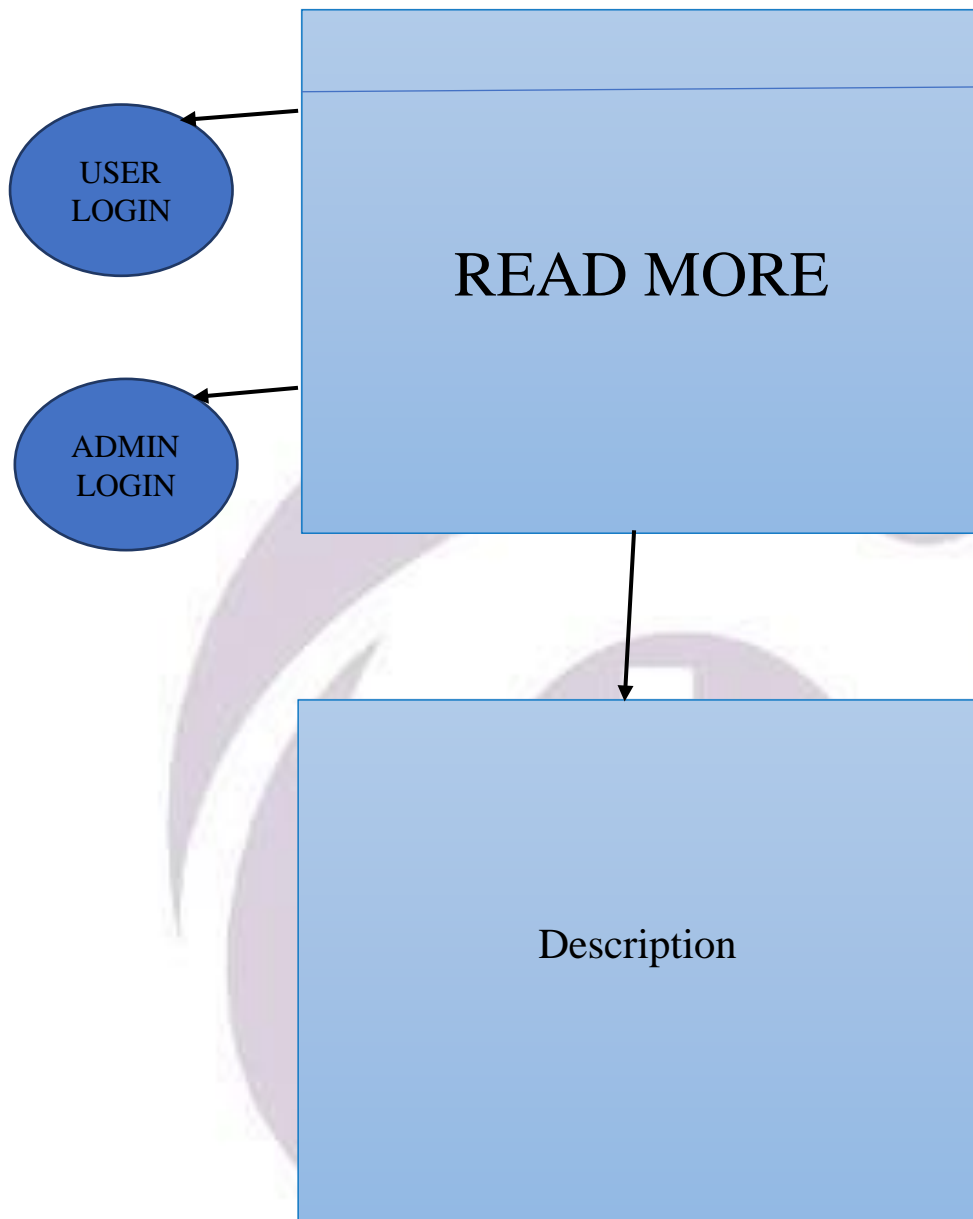
## 5.WINDOW



## 6.WINDOW



## 7.WINDOW





## CODING

### SAVE USER INFO

```
# Writing to an excel  
# sheet using Python
```

```
import xlwt
```

```
from xlwt import Workbook
```

```
# Workbook is created
```

```
wb = Workbook()
```

```
# add_sheet is used to create sheet.
```

```
sheet1 = wb.add_sheet('Sheet 1')
```

```
sheet1.write(1, 0, 'ISBT DEHRADUN')
```

# 1 is used for columns

```
sheet1.write(2, 0, 'SHASTRADHARA')
```

```
sheet1.write(3, 0, 'CLEMEN TOWN')
```

```
sheet1.write(4, 0, 'RAJPUR ROAD')
```

```
sheet1.write(5, 0, 'CLOCK TOWER')
```

```
sheet1.write(0, 1, 'ISBT DEHRADUN')
```

# 1 is used for rows

```
sheet1.write(0, 2, 'SHASTRADHARA')
```

```
sheet1.write(0, 3, 'CLEMEN TOWN')
```

```
sheet1.write(0, 4, 'RAJPUR ROAD')
```

```
sheet1.write(0, 5, 'CLOCK TOWER')
```

```
wb.save('User_Info.xls')
```

## Admin Login

```
# _____
#-----Importing Required Package(API)-----
--
#-----
from tkinter import Label, Button
from PIL import ImageTk
from tkinter import messagebox, Frame, Entry, END, Tk
import pymysql
class Register:

# _____
#-----FRONT END CODE-----
---
#-----
#====Function=====
def __init__(self,root):
    self.root=root
    self.root.title("ConsoleLancer")
    self.root.geometry("1600x750+0+0")
    # _____
    #-----Frame And Background-----
    #-----
    #===main-Background===
    self.bg=ImageTk.PhotoImage(file="bg.png")
    bg=Label(self.root,image=self.bg).place(x=0,y=0,relwidth=1,relheight=1)

    #===Sub-Background=====
    self.left=ImageTk.PhotoImage(file="Sub_bg.png")
    left=Label(self.root,image=self.left).place(x=80,y=100,width=400,height=500)

    #===Register fream=====
    frame1=Frame(self.root,bg="white")
    frame1.place(x=480,y=100,width=800,height=500)

    #===Form Heading=====
    title=Label(frame1,text="ADMIN SIGN IN", font=("time new
roman",20,"bold"),bg="white",fg="#838786")
    title.place(x=270,y=100)

    # _____
    #-----Entry feilds and Headings -----
    #-----
```

```

# =====E-mail or Number Text And Field=====
email = Label(frame1, text="E-Mail Or Number", font=("time new roman", 15, "bold"),
bg="white", fg="gray")
email.place(x=150, y=180)
self.email = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.email.place(x=400, y=180, width=250)

# =====Password Text And Field=====
passw = Label(frame1, text="Password", font=("time new roman", 15, "bold"), bg="white",
fg="gray")
passw.place(x=150, y=230)
self.passw = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.passw.place(x=400, y=230, width=250)

# _____
#-----Buttons-----
#-----

# =====Register or Signin button=====

# =====Singin Button=====
self.signin_btn = ImageTk.PhotoImage(file="Sign_In.png")
signin =
Button(frame1, image=self.signin_btn, activebackground="#ffffff", command=self.log_in, bd=0, bg="#ff
fff", cursor="hand2")
signin.place(x=265, y=300)
# =====Signup Button=====
self.signup_btn = ImageTk.PhotoImage(file="Sign_Up.png")
sigup =
Button(self.root, image=self.signup_btn, activebackground="#013c74", command=self.sign_up, bg="#0
13a71", cursor="hand2", bd=0)
#sigup.place(x=160, y=500)

#=====Read More Button=====
self.read_more = ImageTk.PhotoImage(file="Read_more.png")
read_more = Button(self.root, text="Read More", activebackground="#013c74",
image=self.read_more, command=self.read_More_page, bg="#013c74",
bd=0, cursor="hand2")
read_more.place(x=220, y=455)

# _____
#-----BACK END CODE-----
#-----
#-----

```

```

#=====Function for going to sign in page=====
def log_in(self):
    if self.email.get()==" or self.passw.get()=="":
        messagebox.showerror("Error","Please Enter User Name And Password",parent=self.root)
    else:
        try:
            con=pymysql.connect(host="localhost",user="root",password="",database="aug")
            cur=con.cursor()
            cur.execute("select * from adminTab where admin=%s and
password=%s",(self.email.get(),self.passw.get()))
            row=cur.fetchone()
            if row==None:
                messagebox.showerror("Error","Invalid User Name and Password",parent=self.root)
            else:
                messagebox.showinfo("Success","Welcome",parent=self.root)
                self.root.destroy()
                import Admin_panel
                con.close()
        except Exception as es:
            messagebox.showerror("Error",f"Error Due to: {str(es)}",parent=self.root)

# =====Function for Going to Sign up page=====
def sign_up(self):
    self.root.destroy()
    import Admin_Registration

#====Function to delete current page and jump on Read More Page=====
def read_More_page(self):
    self.root.destroy()
    import Read_More

# =====function to clear the fields after success=====
def clear(self):
    self.email.delete(0, END)
    self.passw.delete(0, END)

root=Tk()
obj=Register(root)
root.mainloop()

```

## Admin DashBoard

```
# _____  
_____  
#-----Importing Required Package(API)-----  
--  
#-----  
  
import mysql  
from PIL import ImageTk  
import tkinter as tk  
import mysql.connector  
from tkinter import ttk, filedialog  
from xlwt import Workbook  
  
class Register:  
  
#  
_____  
_____  
#-----FRONT END CODE-----  
----  
#-----  
  
#====Root Function=====  
def __init__(self,root):  
    self.root=root  
    self.root.title("ConsoleLancer")  
    self.root.geometry("1350x740+0+0")  
  
# _____  
#-----Frame And Background-----  
#-----  
  
# =====Frames=====  
  
# -----First Frame-----  
self.topLeft = ImageTk.PhotoImage(file="Admin_TopLeft.png")  
topleft = tk.Label(self.root, image=self.topLeft)  
topleft.place(x=-2, y=0)  
  
# -----Second Frame-----  
self.left = ImageTk.PhotoImage(file="Admin_panel_Header.png")  
left = tk.Label(self.root, image=self.left)
```

```

left.place(x=300, y=0, width=1050, height=195)

# -----Third Frame-----
frame3 = tk.Frame(self.root,bd=2,bg="#141F23")
frame3.place(x=-5, y=250, width=310, height=547)

# -----Fourth Frame-----
self.frame4 = tk.Frame(self.root,bg="#3b3f42")
self.frame4.place(x=300, y=195, width=1050, height=547)

#=====Blank Area [frame 1]=====

#-----Connecting To DataBase For Printing Admin Name-----
mydbadmin = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
cursoradmin = mydbadmin.cursor()
sql = "SELECT `admin` FROM `adminTab`"
#-----Fetching Admin Name-----
cursoradmin.execute(sql)
adminName = cursoradmin.fetchone()
for i in adminName:
    x = adminName

#-----Printing Admin Name On Dashedboard-----
self.admin_Name = tk.Label(self.root, text="%s"%adminName, font=("time new roman",15,
"bold"), bg="#141F23",
fg="#838786")
self.admin_Name.place(x=75,y=190)

#-----Sepration Line-----
self.line = ImageTk.PhotoImage(file="Line.png")
line = tk.Label(self.root, image=self.line,bg="#293f4c", width=260)
line.place(x=20, y=230)

"This frame is holding Admin Menu bar Title"

#=====Admin Panel Heading [Frame 2]=====
"This frame is containing Header. Which is already declared & initialized in above code"

#=====Button Area [Frame 3]=====

#-----Creating and placing Show Feature Button-----
self.show = ImageTk.PhotoImage(file="Feature.png")
self.show2 =
tk.Button(frame3,image=self.show,activebackground="#172637",width=400,bg="#1a262b",
command=self.show_Feature, bd=0, cursor="hand2")

```

```

self.show2.place(x=-100, y=25)

#-----Creating User Information button-----
self.user_Info_btt = tk.Button(frame3, text="User
Info",activebackground="#172637",font=("time new roman",15,"bold"),fg="white",bg="#1a262b",
command=self.user_Info, bd=0, cursor="hand2")

#----Creating Download button for Downloading user information-----
self.show5 = ImageTk.PhotoImage(file="Feature.png")
self.download_btt =
tk.Button(frame3,text="Download",activebackground="#172637",font=("time new
roman",15,"bold"),fg="white",bg="#293f4c", command=self.download, bd=0, cursor="hand2")
self.download1_btt = tk.Button(frame3, text="- Download Info",activebackground="#172637",
font=("time new roman", 15, "bold"), fg="white",
bg="#293f4c", command=self.download1, bd=0, cursor="hand2")

#-----Creating Sign out button-----
self.admin_Sign_out_btt = tk.Button(frame3, text="Sign Out",
activebackground="#172637",font=("time new
roman",15,"bold"),fg="white",bg="#293f4c",command=self.sign_out,bd=0, cursor="hand2")

#-----Creating hide button-----
self.show5 = ImageTk.PhotoImage(file="Hide_Feature.png")
self.hide = tk.Button(frame3,image=self.show5,activebackground="#172637", font=("time new
roman", 15, "bold"), fg="white",width=400,bg="#1a262b",
command=self.hide_Feature, bd=0, cursor="hand2")

#=====Download Info=====

#-----Creating button for downloading all details-----
self.download_All_btt = tk.Button(frame3,
text="All",activebackground="#172637",command=self.user_All, font=("time new roman", 15,
"bold"),
fg="white", bg="#293f4c", bd=0, cursor="hand2")

#-----Creating button for downloading name of users-----
self.download_Name_btt = tk.Button(frame3, text="Name",activebackground="#172637",
font=("time new roman", 15, "bold"),
fg="white", bg="#293f4c", command=self.user_Name, bd=0,
cursor="hand2")

#-----Creating button for downloading number -----
self.download_Number_btt = tk.Button(frame3, text="Number",activebackground="#172637",
font=("time new roman", 15, "bold"),

```



```
fg="white", bg="#293f4c", command=self.user_Number, bd=0,
cursor="hand2")
```

```
#-----Creating button for downloading numbers-----
self.download_Id_btt = tk.Button(frame3, text="User ID",activebackground="#172637",
font=("time new roman", 15, "bold"), fg="white",
bg="#293f4c", command=self.user_ID, bd=0, cursor="hand2")
```

```
# =====Description Area [Frame 4]=====
```

```
#-----Placing Headig in frame 4 -----
self.title = tk.Label(self.frame4, text="USER INFORMATION",font=("time new roman", 20,
"bold"), bg="#3b3f42" , fg="white")
```

```
#-----Placing default image in frame 4 -----
self.welcomeimg = ImageTk.PhotoImage(file="Admin_Welcome.png")
self.welcome = tk.Label(self.frame4, image=self.welcomeimg,bg="#3b3f42" )
self.welcome.place(x=300, y=50)
```

```
"Form 4 code is working for Back End"
#
```

```
# -----BACK END CODE-----
# -----
```

```
#=====Creating function for showing feature=====
```

```
def show_Feature(self):
    self.show2.place_forget()
    self.hide.place(x=-100, y=25)
```

```
self.admin_Sign_out_btt.place(x=85, y=60)
self.user_Info_btt.place(x=85, y=95)
self.download_btt.place(x=70, y=130)
```

```
def download(self):
    self.download_btt.place_forget()
    self.download1_btt.place(x=70, y=130)

    self.download_All_btt.place(x=100,y=165)
    self.download_Name_btt.place(x=100,y=200)
    self.download_Number_btt.place(x=100, y=235)
    self.download_Id_btt.place(x=100,y=270)
```



```

def download1(self):
    self.download1_btt.place_forget()
    self.download_btt.place(x=70, y=130)

    self.download_All_btt.place_forget()
    self.download_Name_btt.place_forget()
    self.download_Number_btt.place_forget()
    self.download_Id_btt.place_forget()

```

```

def hide_Feature(self):
    self.hide.place_forget()
    self.show2.place(x=-100, y=25)
    self.user_Info_btt.place_forget()
    self.download_btt.place_forget()
    self.admin_Sign_out_btt.place_forget()
    self.download1_btt.place_forget()
    self.download_All_btt.place_forget()
    self.download_Name_btt.place_forget()
    self.download_Number_btt.place_forget()
    self.download_Id_btt.place_forget()

```

#=====Function for User Registration=====

```

def user_Info(self):
    self.welcome.place_forget()
    self.title.place(x=400, y=80)
    mydb = mysql.connector.connect(user="root", password="", database="aug", host="localhost")
    cursor = mydb.cursor()
    sql = "SELECT `first_name`, `last_name`, `phone_no`, `mail` FROM `user`"

    cursor.execute(sql)
    rows = cursor.fetchall()
    total = cursor.rowcount

    tv = ttk.Treeview(self.frame4, columns = (1,2,3,4), show = "headings", height = "8")
    tv.place(x=120,y=150)

    tv.heading(1, text="First Name")
    tv.heading(2, text="Last Name")
    tv.heading(3, text="Phone Number")
    tv.heading(4, text="Email Id")

```

for i in rows:

```

        tv.insert("", 'end', values = i)

    cursor.close()
    mydb.close

def user_All(self):
    nameFilePath = filedialog.askdirectory(parent=root,initialdir="/path/to/start/",title='Please select
a directory')

    if nameFilePath=="":
        pass
    else:
        #=====Fetching First
Name=====
        mydb1 = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
        cursor1 = mydb1.cursor()
        sql = "SELECT `first_name` FROM `user`"

        cursor1.execute(sql)
        rows1 = cursor1.fetchall()
        #total = cursor1.rowcount
        wb = Workbook()

        sheet1 = wb.add_sheet('Sheet 1')
        sheet1.write(0, 0,'First Name')
        sheet1.write(0, 1, 'Last Name')
        sheet1.write(0, 2, 'Phone Number')
        sheet1.write(0, 3, 'Gmail ID')

        row_no1 = 1
        for i in rows1:
            sheet1.write(row_no1, 0, "%s" % i) # 1 is used for rows
            row_no1 = row_no1 + 1
        cursor1.close()
        mydb1.close()

        #=====Fetching Last Name
=====
        mydb2 = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
        cursor2 = mydb2.cursor()
        sql = "SELECT `last_name` FROM `user`"

        cursor2.execute(sql)
        rows2 = cursor2.fetchall()

```

```

row_no2 = 1
for j in rows2:
    sheet1.write(row_no2, 1, "%s" % j) # 1 is used for rows
    row_no2 = row_no2 + 1
cursor2.close()
mydb2.close()

#=====Fetching
Number=====
mydb3 = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
cursor3 = mydb3.cursor()
sql = "SELECT `phone_no` FROM `user`"

cursor3.execute(sql)
rows3 = cursor3.fetchall()

row_no3 = 1
for j in rows3:
    sheet1.write(row_no3, 2, "%s" % j) # 1 is used for rows
    row_no3 = row_no3 + 1
cursor3.close()
mydb3.close()

#=====Fetching Gmail
ID=====

mydb4 = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
cursor4 = mydb4.cursor()
sql = "SELECT `mail` FROM `user`"

cursor4.execute(sql)
rows4 = cursor4.fetchall()

row_no4 = 1
for j in rows4:
    sheet1.write(row_no4, 3, "%s" % j) # 1 is used for rows
    row_no4 = row_no4 + 1
cursor4.close()
mydb4.close()
wb.save('%s/All Information.xls' % nameFilePath)

def user_Name(self):
    nameFilePath = filedialog.askdirectory(parent=root,initialdir="/path/to/start/",title='Please select

```

a directory')

```
    if nameFilePath=="":
        pass
    else:
        mydb1 = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
        cursor1 = mydb1.cursor()
        sql = "SELECT `first_name` FROM `user`"

        cursor1.execute(sql)
        rows = cursor1.fetchall()
        total = cursor1.rowcount
        wb = Workbook()

        sheet1 = wb.add_sheet('Sheet 1')
        row_no = 1
        for i in rows:
            sheet1.write(row_no,0,"%s"% i) # 1 is used for rows
            row_no = row_no + 1
        cursor1.close()
        mydb1.close()

        mydb2 = mysql.connector.connect(user="root", password="", database="aug",
host="localhost")
        cursor2 = mydb2.cursor()
        sql = "SELECT `last_name` FROM `user`"

        cursor2.execute(sql)
        rows2 = cursor2.fetchall()

        row_no1 = 1
        for j in rows2:
            sheet1.write(row_no1,1, "%s" % j) # 1 is used for rows
            row_no1 = row_no1 + 1
        cursor2.close()
        mydb2.close()
        wb.save('%s/User_Name.xls' % nameFilePath)
```

def user\_Number(self):

numberFilePath = filedialog.askdirectory(parent=root,initialdir="/path/to/start/",title='Please  
select a directory')

```
    if numberFilePath=="":
        pass
```

else:

```
mydb3 = mysql.connector.connect(user="root", password="", database="aug",  
host="localhost")
```

```
cursor3 = mydb3.cursor()
```

```
sql = "SELECT `phone_no` FROM `user`"
```

```
cursor3.execute(sql)
```

```
rows3 = cursor3.fetchall()
```

```
total = cursor3.rowcount
```

```
wb = Workbook()
```

```
sheet3 = wb.add_sheet('Sheet 1')
```

```
row_no = 1
```

```
for i in rows3:
```

```
    sheet3.write(row_no, 0, "%s" % i) # 1 is used for rows
```

```
    row_no = row_no + 1
```

```
cursor3.close()
```

```
mydb3.close()
```

```
wb.save('%s/User_Number.xls' % numberFilePath)
```

```
def user_ID(self):
```

```
    idFilePath = filedialog.askdirectory(parent=root, initialdir="/path/to/start/", title='Please select a  
directory')
```

```
    if idFilePath == "":
```

```
        pass
```

```
    else:
```

```
        mydb4 = mysql.connector.connect(user="root", password="", database="aug",  
host="localhost")
```

```
        cursor4 = mydb4.cursor()
```

```
        sql = "SELECT `mail` FROM `user`"
```

```
        cursor4.execute(sql)
```

```
        rows4 = cursor4.fetchall()
```

```
        total = cursor4.rowcount
```

```
        wb = Workbook()
```

```
        sheet1 = wb.add_sheet('Sheet 1')
```

```
        row_no = 1
```

```
        for i in rows4:
```

```
            sheet1.write(row_no, 0, "%s" % i) # 1 is used for rows
```

```
            row_no = row_no + 1
```

```
        cursor4.close()
```

```
mydb4.close()
```

```
wb.save('%s/User_ID.xls' % idFilePath)
```

```
#=====This function is working for achiving Logout
```

```
Functionality=====
```

```
def sign_out(self):
```

```
    self.root.destroy()
```

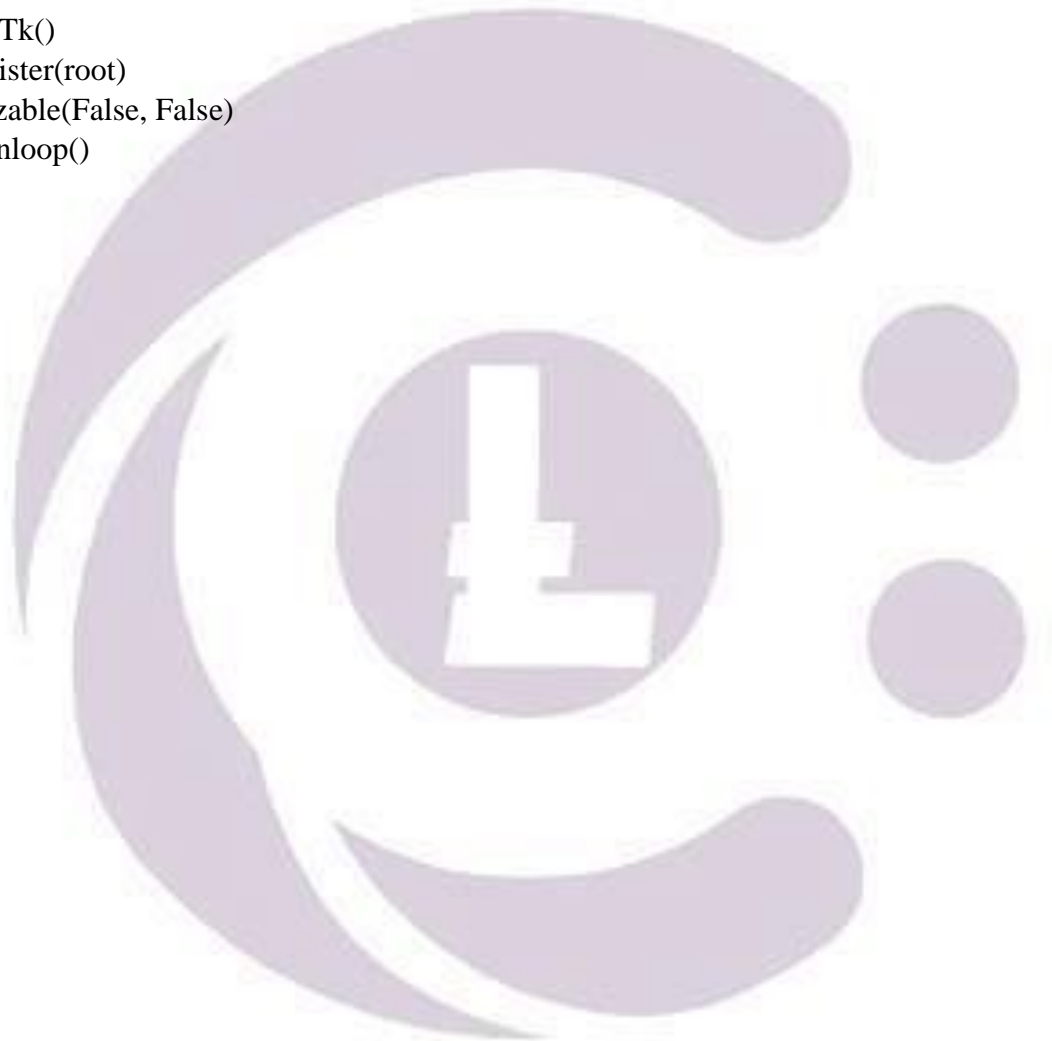
```
    import Admin_login
```

```
root= tk.Tk()
```

```
obj=Register(root)
```

```
root.resizable(False, False)
```

```
root.mainloop()
```



## User Registration

```
# _____  
_____  
#-----Importing Required Package(API)-----  
--  
#-----  
from tkinter import Label  
  
from PIL import ImageTk  
from tkinter import ttk, messagebox, Frame, Entry, CENTER, IntVar, Checkbutton, Button, END, Tk  
import pymysql  
class Register:  
#  
_____  
_____  
# -----FRONT END CODE-----  
---  
# -----  
  
def __init__(self,root):  
    self.root=root  
    self.root.title("ConsoleLancer")  
    self.root.geometry("1600x750+0+0")  
    # _____  
    # -----Frame And Background-----  
    # -----  
  
    #main-Background  
    self.bg=ImageTk.PhotoImage(file="bg.png")  
    bg=Label(self.root,image=self.bg).place(x=0,y=0,relwidth=1,relheight=1)  
  
    #Sub-Background  
    self.left=ImageTk.PhotoImage(file="Sub_bg.png")  
    left=Label(self.root,image=self.left).place(x=80,y=100,width=400,height=500)  
  
    #===Register fream===  
    frame1=Frame(self.root,bg="white")  
    frame1.place(x=480,y=100,width=800,height=500)  
  
    #====Form Area =====  
    title=Label(frame1,text="USER SIGN UP", font=("time new roman",20,"bold"),bg="white"  
,fg="#838786")  
    title.place(x=300,y=50)
```

```

# -----
# -----Entry feilds and Headings -----
# -----

# =====First Name Text And Field=====
f_name = Label(frame1, text="First Name", font=("time new roman", 15, "bold"), bg="white",
fg="gray")
f_name.place(x=120, y=100)
self.fname = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.fname.place(x=120, y=130, width=250)

# =====Last Name Text And Field=====
l_name = Label(frame1, text="Last Name", font=("time new roman", 15, "bold"), bg="white",
fg="gray")
l_name.place(x=440, y=100)
self.lname = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.lname.place(x=440, y=130, width=250)

# =====Contact No.=====
contact = Label(frame1, text="Contact No", font=("time new roman", 15, "bold"), bg="white",
fg="gray").place(
    x=120, y=170)
self.contact = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.contact.place(x=120, y=200, width=250)

# =====E-Mail Id=====
E_mail = Label(frame1, text="E-Mail ID", font=("time new roman", 15, "bold"), bg="white",
fg="gray").place(
    x=440, y=170)
self.e_mail = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.e_mail.place(x=440, y=200, width=250)

# =====Security Quistion.=====
ques = Label(frame1, text="Security Question", font=("time new roman", 15, "bold"),
bg="white",
fg="gray").place(x=120, y=240)
# =====Combo Box=====
self.select = ttk.Combobox(frame1, font=("times new roman", 15), state='readonly',
justify=CENTER)
self.select['values'] = ("select", "Your first place ", "Your Best friend Name ",)
self.select.place(x=120, y=270, width=250)
self.select.current(0)

# =====Asnwer =====
ans = Label(frame1, text="Answer", font=("time new roman", 15, "bold"), bg="white",

```



```

fg="gray").place(
    x=440, y=240)
self.ans = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.ans.place(x=440, y=270, width=250)

# =====Password=====
psw = Label(frame1, text="Password", font=("time new roman", 15, "bold"), bg="white",
fg="gray").place(x=440, y=310)
self.psw = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.psw.place(x=120, y=340, width=250)

# =====Confirm Password=====
cpsw = Label(frame1, text="Comfirm Password", font=("time new roman", 15, "bold"),
bg="white", fg="gray")
cpsw.place(x=120, y=310)
self.cpsw = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.cpsw.place(x=440, y=340, width=250)

# =====Check Box=====
self.check=IntVar()
chk = Checkbutton(frame1, text="I Agree with details", variable=self.check, onvalue=1,
offvalue=0, bg="white",font=("time new roman", 12))
chk.place(x=120, y=380)

# -----Buttons-----
# -----

# =====Regester button=====

#=====Singin Button=====
self.signin_btn = ImageTk.PhotoImage(file="Sign_In.png")
signin =
Button(self.root,image=self.signin_btn,activebackground="#013a71",command=self.sign_in,bg="#01
3a71",bd=0,cursor="hand2").place(x=160,y=500)

#=====Singup Button=====
self.signup_btn = ImageTk.PhotoImage(file="Sign_Up.png")
sigup = Button(frame1,
image=self.signup_btn,cursor="hand2",activebackground="#ffffff",bd=0,bg="#ffffff",command=self.
register_data)
sigup.place(x=280, y=420)

# =====Read More Button=====
self.read_more = ImageTk.PhotoImage(file="Read_more.png")
read_more = Button(self.root, text="Read

```

```
More",activebackground="#013c74",image=self.read_more,
command=self.read_More_page,bg="#013c74",bd=0,cursor="hand2").place(x=220, y=455)
```

```
#
```

```
# -----BACK END CODE-----
```

```
# -----
```

```
#=====Function for regestration form data insertion and fetch=====
def register_data(self):
    if self.fname.get()==" " or self.lname.get()==" " or self.contact.get()==" " or
self.e_mail.get()==" " or self.select.get()==" " or self.ans.get()==" " or self.psw.get()==" " or
self.cpsw.get()==" ":
        messagebox.showerror("Error","All fields are required ",parent=self.root)
    elif self.psw.get()!=self.cpsw.get():
        messagebox.showerror("Error", "Password must be same ", parent=self.root)
    elif self.check.get()==0:
        messagebox.showerror("Error", "agree check our tems and condition ", parent=self.root)
    else:
        try:
            con=pymysql.connect(host="localhost",user="root",password="",database="aug")
            cur=con.cursor()
            cur.execute("select * from user where phone_no=%s", self.contact.get())
            prow = cur.fetchone()
            cur.execute("select * from user where mail=%s", self.e_mail.get())
            row=cur.fetchone()
            if row!=None or prow!=None:
                messagebox.showerror("Error", "Email or phone no already registered try with another
one ", parent=self.root)
            else:
                cur.execute("insert into
user(first_name,last_name,phone_no,mail,Ques,answer,password) values(%s,%s,%s,%s,%s,%s,%s)",
                (
                    self.fname.get(),
                    self.lname.get(),
                    self.contact.get(),
                    self.e_mail.get(),
                    self.select.get(),
                    self.ans.get(),
                    self.psw.get(),
                ))
                con.commit() #Data Inserted
                con.close() #connection closed
                messagebox.showinfo("success", "Register Success",parent=self.root)
```

```

        self.clear()
        self.root.destroy()
        import Aug
    except Exception as es:
        messagebox.showerror("Error",f"Error Due to {str(es)}", parent=self.root)

# =====Function for going to sign in page=====

# =====Function for going to sign in page=====
def sign_in(self):
    self.root.destroy()
    import User_Login

# =====function to clear the fields after success=====
def clear(self):
    self.fname.delete(0, END)
    self.lname.delete(0, END)
    self.contact.delete(0, END)
    self.e_mail.delete(0, END)
    self.ans.delete(0,END)
    self.cpsw.delete(0,END)
    self.select.current(0)
    self.psw.delete(0, END)

# =====Function to delete current page and jump on Read More Page=====
def read_More_page(self):
    self.root.destroy()
    import Read_More

root=Tk()
obj=Register(root)
root.mainloop()

```

## User Login

```
# _____  
#-----Importing Required Package(API)-----  
--  
#-----  
  
from tkinter import *  
from PIL import ImageTk  
from tkinter import messagebox  
import pymysql  
class Register:  
#  
#-----  
#-----FRONT END CODE-----  
---  
#-----  
  
#=====Root Function=====  
def __init__(self,root):  
    self.root=root  
    self.root.title("ConsoleLancer")  
    self.root.geometry("1600x750+0+0")  
    # _____  
    # -----Frame And Background-----  
    # -----  
    #=====main-Background=====  
    self.bg=ImageTk.PhotoImage(file="bg.png")  
    bg=Label(self.root,image=self.bg).place(x=0,y=0,relwidth=1,relheight=1)  
  
    #=====Sub-Background=====  
    self.left=ImageTk.PhotoImage(file="Sub_bg.png")  
    left=Label(self.root,image=self.left).place(x=80,y=100,width=400,height=500)  
  
    #=====Register fream=====  
    frame1=Frame(self.root,bg="white")  
    frame1.place(x=480,y=100,width=800,height=500)  
  
    #=====Form Area =====  
    title=Label(frame1,text="USER SIGN IN", font=("time new  
roman",20,"bold"),bg="white",fg="#838786")
```

```

title.place(x=270,y=100)

# _____
# -----Entry feilds and Headings -----
# -----

#=====E-mail or Number Text And Field=====
email = Label(frame1, text="E-Mail Or Number", font=("time new roman", 15, "bold"),
bg="white", fg="gray")
email.place(x=150, y=180)
self.email = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.email.place(x=400, y=180, width=250)

#=====Password Text And Field=====
passw = Label(frame1, text="Password", font=("time new roman", 15, "bold"), bg="white",
fg="gray")
passw.place(x=150, y=230)
self.passw = Entry(frame1, font=("times new roman", 15), bg="lightgray")
self.passw.place(x=400, y=230, width=250)

# _____
# -----Buttons-----
# -----

#=====Signup Button=====
self.signin_btn = ImageTk.PhotoImage(file="Sign_In.png")
signin =
Button(frame1,image=self.signin_btn,activebackground="white",command=self.log_in,bg="#ffffff",b
d=0,cursor="hand2")
signin.place(x=265, y=300)
#=====Singin Button=====
self.signup_btn = ImageTk.PhotoImage(file="Sign_Up.png")
sigup =
Button(self.root,image=self.signup_btn,activebackground="#013c74",command=self.sign_up,bg="#0
13a71",cursor="hand2",bd=0)
sigup.place(x=160, y=500)

# =====Read More Button=====
self.read_more = ImageTk.PhotoImage(file="Read_more.png")
read_more = Button(self.root,image=self.read_more,activebackground="#013c74",
command=self.read_More_page, bg="#013c74",
bd=0, cursor="hand2").place(x=220, y=455)

# _____
# -----BACK END CODE-----

```

```

-----
#-----

#=====Function for Going to Sign up page=====
def sign_up(self):
    self.root.destroy()
    import User_Registration

#=====Function for going to sign in page=====
def log_in(self):
    if self.email.get()==" or self.passw.get()=="":
        messagebox.showerror("Error","Please Enter User Name And Password",parent=self.root)
    else:
        try:
            con=pymysql.connect(host="localhost",user="root",password="",database="aug")
            cur=con.cursor()
            cur.execute("select * from user where mail=%s and
password=%s",(self.email.get(),self.passw.get()))
            row=cur.fetchone()
            if row==None:
                messagebox.showerror("Error","Invalid User Name and Password",parent=self.root)
            else:
                messagebox.showinfo("Success","Welcome",parent=self.root)
                self.root.destroy()
                import Aug
                con.close()
        except Exception as es:
            messagebox.showerror("Error",f"Error Due to: {str(es)}",parent=self.root)

#=====function to clear the fields after success=====
def clear(self):
    self.email.delete(0, END)
    self.passw.delete(0, END)

# =====Function to delete current page and jump on Read More Page=====
def read_More_page(self):
    self.root.destroy()
    import Read_More

root=Tk()
obj=Register(root)
root.mainloop()

```

## User DashBoard

```
#-----!!!_This is the main window where main operation are going to perform_!!!-----
-----
#
-----

#=====Importing required
libraries=====
#-----

from tkinter.ttk import Label, Button
from tkinter import StringVar, Checkbutton, Tk, Label, Button, messagebox
from PIL import Image, ImageTk
from tkinter import filedialog
from tkinter import simpledialog
import random
import cv2
import numpy as np
import os                                     #__Note:- { This Library is used to create folder}

#
-----
#=====Creating
class=====
#-----

class Register:
#
-----
#=====creation function to wrape all task=====
#-----
    def __init__(self, root):

        self.root = root
        self.root.title("ConsoleLancer")
        self.root.geometry("1600x750+0+0")

#=====
=====
#_____BACK END
CODE_____
#-----This Code is inderectly connected with front end code-----
#=====
```



```

=====

#=====Creating function for taking sample number from user=====
def Sample_Number():

    global Sample_Number_R
    USER_INP = simpdialog.askstring(title="Test", prompt="Please Enter The Number of
Sample You want")
    Temp_value=USER_INP
    Sample_Number_R = int(Temp_value)

#=====Creating Variable for Checking Condition of Download
button=====
    self.file = 0
    self.path = 0
    self.filter = 0
    #-----Variable For Checking Default Displaye Image -----
    self.sample_Image = 0

#=====Creating function to upload
file=====
    def Upload_file():
        self.filename = 0
        self.filename = filedialog.askopenfilename(initialdir='/guis', title="Open An Image File",
                                                    filetypes=(("PNG File", "*.png"), ("All Files", "*.*")))
        #-----Passing Filename Address in sel.file variable for if condition -----
        self.file = self.filename
        self.sample_Image = self.filename
        self.filename1 = self.filename2 = self.filename

        #----Resizing Sample image in 700x270-----
        my_image = Image.open(self.filename1)
        resized = my_image.resize((700, 270), Image.ANTIALIAS)
        self.my_image1 = ImageTk.PhotoImage(resized)

        #-----Resizing Image in 220x220-----
        my_image1 = Image.open(self.filename2)
        resized1 = my_image1.resize((220, 220), Image.ANTIALIAS)
        self.my_image2 = ImageTk.PhotoImage(resized1)
        self.Filter_user_Sample = Label(root, image=self.my_image2)

        # -----Placing Sample Image as Default view-----
        self.default_User_sample = Label(root, image=self.my_image1)

    if self.filename == 0:

```



```

        self.default_User_sample.place(x=310, y=280)

    else:
        cv2.imread(Hide_the_chk_buttons())
        self.default_User_sample.place_forget()
        self.default_User_sample.place(x=310, y=280)

# -----Asking user for number of sample-----
cv2.imread(Sample_Number()) # --Asking user for number of sample

#=====Creating function for Setting Path=====
def savefile():
    global filepath
    filepath = filedialog.askdirectory()
    self.path = filepath

#=====Creating Function to create new folder=====
def createFolder(directory): # Creating function to create New Folder
    try:
        if not os.path.exists(directory):
            os.makedirs(directory)
    except OSError:
        print('Error: Creating directory. ' + directory)

#
=====
#-----Filter:- Creating Filters To Generate Varius Sample of Data-----
#-----

#=====Creating Function for Resize Filter=====
def Resize_filter():
    global resize_Sample_number
    resize_Sample_number = Sample_Number_R
    if Resize_variable.get() == "Resize":
        Sample_folder = createFolder('%s/Resize_Effect_Sample/' % (filepath)) #Calling function
to create Folder
        import cv2

        for resize_Loop in range(0, resize_Sample_number): # Creating loop
            img = cv2.imread(self.filename) # calling user input image
            w = random.randint(80, 1000) # passing random value for random width
            h = random.randint(80, 1000) # passing random value for random width
            width, height = w, h # Passing x and y in height and width

```

```

        imageresize = cv2.resize(img, (width, height)) # passing Loop width and height image in
variable
        cv2.imwrite('%s/Resize_Effect_Sample/%s.jpg' % (filepath, resize_Loop+1),
imageresize) # Saving image at specific path
        # ----Note:- This code is working properly-----

    else:
        pass

# =====Invert Filter =====
def Invert_filter():
    if Invert_variable.get() == "invert":
        import cv2
        global invert_Sample_number
        invert_Sample_number = Sample_Number_R
        Sample_folder = createFolder('%s/Invert_Effect_Sample/' % (filepath)) # Calling function
to create Folder

        def invert_image():
            image = cv2.imread(self.filename)
            image1 = cv2.bitwise_not(image)
            cv2.imwrite('%s/Invert_Effect_Sample/0.jpg' % (filepath), image1) # Saving Byte change
inverted image

            for invert_loop in range(0, invert_Sample_number):
                channel = random.uniform(0, 481)
                image2 = (channel - image)
                cv2.imwrite('%s/Invert_Effect_Sample/%s.jpg' % (filepath, invert_loop+1), image2)
#Saving inverted image generated by random value
                cv2.imread(invert_image())
        #-----Note:- This Code is Working Properly-----
    else:
        pass

# =====Flip filter=====
def Flip_filter():

    if Flip_variable.get() == "flip":
        Sample_folder = createFolder('%s/Flip_Effect_Sample/' % (filepath)) # Calling function to
create Folder
        import cv2
        originalImage = cv2.imread(self.filename) # Taking Image For Generating Sample
        flipv = cv2.flip(originalImage, 1) # Generating Sample
        flipbv = cv2.flip(originalImage, -0)
        flipbh = cv2.flip(originalImage, -1)

```

```

        cv2.imwrite('%s/Flip_Effect_Sample/1.jpg' % (filepath,), originalImage) # Saving
Generated Image
        cv2.imwrite('%s/Flip_Effect_Sample/2.jpg' % (filepath), flipv)
        cv2.imwrite('%s/Flip_Effect_Sample/3.jpg' % (filepath), flipbv)
        cv2.imwrite('%s/Flip_Effect_Sample/4.jpg' % (filepath), flipbh)
    else:
        pass

# -----Note:- This Code is working properly-----

# =====rotate filter =====
def Rotate_filter():

    if Rotate_variable.get() == "rotate":
        Sample_folder = createFolder('%s/Rotate_Effect_Sample/' % (filepath)) # Calling function
to create Folder
        import cv2
        originalImage = cv2.imread(self.filename) # Taking Image For Generating Sample

        img_rotate = cv2.rotate(originalImage, cv2.ROTATE_90_CLOCKWISE) # Generating
Sample
        img_rotate90 = cv2.rotate(originalImage, cv2.ROTATE_90_COUNTERCLOCKWISE)
        img_rotate180 = cv2.rotate(originalImage, cv2.ROTATE_180)

        cv2.imwrite('%s/Rotate_Effect_Sample/1.jpg' % (filepath), originalImage) # Saving
Generated Sample
        cv2.imwrite('%s/Rotate_Effect_Sample/2.jpg' % (filepath), img_rotate)
        cv2.imwrite('%s/Rotate_Effect_Sample/3.jpg' % (filepath), img_rotate90)
        cv2.imwrite('%s/Rotate_Effect_Sample/4.jpg' % (filepath), img_rotate180)
    # -----Note:- This filter is working properly-----

    else:
        pass

#=====Creating function for Hue Filter=====
def Hue_filter():
    if Hue_variable.get()=="hue":
        Sample_folder = createFolder('%s/Hue_Effect_Sample/' % (filepath)) # Calling function to
create Folder

        global hue_Sample_number
        hue_Sample_number = Sample_Number_R
        def hue_image():

            image = cv2.imread(self.filename)    #Taking Sample

```

```

for name in range(1, hue_Sample_number + 1):
    saturation = random.randint(5,5001) #Passing Random number for Diffrent Sample
    hue_Efec = random.randint(10, 1000)
    image = cv2.cvtColor(image, cv2.COLOR_BGR2HSV)
    v = image[:, :, 2]
    v = np.where(v <= hue_Efec + saturation, v - saturation, hue_Efec)
    image[:, :, 2] = v
    image = cv2.cvtColor(image, cv2.COLOR_HSV2BGR)

cv2.imwrite('%s/Hue_Effect_Sample/%s.jpg' % (filepath,name1), image)

for name1 in range(1,hue_Sample_number+1):
    hue_image()

#-----Note:- This Code Is Working Properly-----

else:
    pass

#=====Creating function for Light Filter=====
def Light_filter():
    if Light_filter_variable.get() == "light":
        Sample_folder = createFolder('%s/Light_Effect_Sample/' % (filepath)) # Calling function
to create Folder
        global light_Filter_Sample_number
        light_Filter_Sample_number = Sample_Number_R
        import cv2
        import numpy as np
        def add_light():
            image = cv2.imread(self.filename) # Taking Sample

            #for name in range(1, light_Filter_Sample_number + 1):

            gamma = random.uniform(-90,90) # Passing Random number for Diffrent Sample
            if gamma==0:
                gamma=gamma+1
            invGamma = 1.0 / gamma
            table = np.array([((i / 255.0) ** invGamma) * 255
                             for i in np.arange(0.5, 256)]).astype("uint8")
            image1 = cv2.LUT(image, table)
            if gamma >= 1:
                cv2.imwrite('%s/Light_Effect_Sample/%s.jpg' % (filepath,name), image1)
            else:
                cv2.imwrite('%s/Light_Effect_Sample/%s.jpg' % (filepath,name), image1)
        for name in range(1, light_Filter_Sample_number + 1):

```

```

        add_light()
#-----Note:- This Code is working properly-----
    else:
        pass

#=====Creating Function for Light Color Filter=====
def Light_color_filter():
    if Light_color_filters_variable.get() == "IColor":
        Sample_folder = createFolder('%s/Light_color_Effect_Sample/' % (filepath)) # Calling
function to create Folder
        global light_Color_Sample_number
        light_Color_Sample_number = Sample_Number_R
        import cv2
        import numpy as np

    def add_light_color():
        image = cv2.imread(self.filename) # Taking Sample
        gamma = random.uniform(0.1, 2.1) # Passing Random number for Diffrent Sample
        color = random.randint(50, 250) # Passing Random number for Diffrent Sample
        invGamma = 1.0 / gamma
        image = (color - image)
        table = np.array([((i / 255.0) ** invGamma) * 255
            for i in np.arange(0, 256)]).astype("uint8")

        image = cv2.LUT(image, table)
        if gamma >= 1:
            cv2.imwrite('%s/Light_color_Effect_Sample/%s.jpg' % (filepath, name), image)

        else:
            cv2.imwrite('%s/Light_color_Effect_Sample/%s.jpg' % (filepath, name), image)

    for name in range(1, light_Color_Sample_number + 1):
        add_light_color()

#-----Note:- This Code is working properly-----
    else:
        pass

#=====Creating Fucntion for Seturaton Filter=====
def Seturate_filter():
    if Seturate_variable.get()=="Seturate_Image":
        Sample_folder = createFolder('%s/Seturate_Effect_Sample/' % (filepath)) # Calling
function to create Folder
        global Seturation_Sample_number
        Seturation_Sample_number = Sample_Number_R
        import cv2

```

```

import numpy as np
def saturation_image():
    #image = cv2.imread(self.filename) # Taking Sample
    for name in range(1, Seturation_Sample_number + 1):
        image = cv2.imread(self.filename)
        saturation = random.randint(5,400) # Passing Random number for Diffrent Sample
        saturation1 = random.randint(5, 400)
        image = cv2.cvtColor(image, cv2.COLOR_BGR2HSV)

        v = image[:, :, 2]
        v = np.where(v <= saturation1 - saturation, v + saturation, saturation1)
        image[:, :, 2] = v

        image = cv2.cvtColor(image, cv2.COLOR_HSV2BGR)
        cv2.imwrite('%s/Seturate_Effect_Sample/%s.jpg' % (filepath,name), image)
        cv2.imshow("w",image)

    #for name in range(1, Seturation_Sample_number + 1):
        #cv2.imwrite('%s/Seturate_Effect_Sample/%s.jpg' % (filepath, name), image)
    saturation_image()
    #-----Note:- This Code is working properly-----
    #????????????????Note:- But Generating only One Image Need To Work on
    Loop????????????????
    else:
        pass

    #=====Creating Function for Gray Scale Image
    Filter=====
    def Gray_scale_Filter():
        if Gray_scale_variable.get() == "Gray":
            Sample_folder = createFolder(
                '%s/Rectangle_covered_Sample/' % (filepath)) # Calling function to create Folder
            global gray_Scale_Sample_number
            gray_Scale_Sample_number = Sample_Number_R
            for name in range(1, gray_Scale_Sample_number + 1):
                image = cv2.imread(self.filename)
                height, width = image.shape[:2]
                height_value = random.randint(10, 50)
                width_value = random.randint(10, 50)
                position_x = random.randint(50, height)
                position_y = random.randint(50, width)
                color3 = random.randint(50, 200)
                color1 = random.randint(50, 200)
                color2 = random.randint(50, 200)

                cv2.rectangle(image, pt1=(position_y, position_x), pt2=(height_value, width_value),

```



```

        color=(color1, color2, color3), thickness=-1)
cv2.imwrite('%s/Rectangle_covered_Sample/%s.jpg' % (filepath, name), image)

# ??????????Note:- Generating only one sample Work on it????????????????
else:
    pass

#=====Creating Function for Addeptive
Filter=====
def Addeptive_gaussian_filter():
    if Addeptive_variable.get()=="addept":
        Sample_folder = createFolder(
            '%s/Addeptive_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2

        global Addeptive_Sample_number
        Addeptive_Sample_number = Sample_Number_R

    def addeptive_gaussian_noise():
        image = cv2.imread(self.filename) # Taking Sample
        Addept_diffs = random.randint(100, 300) # Passing Random number for Diffrent
Sample:
        Addept_diffh = random.randint(100, 300) # Passing Random number for Diffrent
Sample:
        Addept_diffv = random.randint(100, 300) # Passing Random number for Diffrent
Sample:
        h, s, v = cv2.split(image)
        s = cv2.adaptiveThreshold(s, Addept_diffs, cv2.ADAPTIVE_THRESH_GAUSSIAN_C,
cv2.THRESH_BINARY_INV, 11, 2)
        h = cv2.adaptiveThreshold(h, Addept_diffh, cv2.ADAPTIVE_THRESH_GAUSSIAN_C,
cv2.THRESH_BINARY_INV, 11, 2)
        v = cv2.adaptiveThreshold(v, Addept_diffv, cv2.ADAPTIVE_THRESH_GAUSSIAN_C,
cv2.THRESH_BINARY_INV, 11, 2)
        image = cv2.merge([h, s, v])

        cv2.imshow("w", image)
        cv2.imwrite('%s/Addeptive_Effect_Sample/%s.jpg' % (filepath, name), image)

    for name in range(1, Addeptive_Sample_number + 1):
        addeptive_gaussian_noise()
#????????????????This Code Is Not Generating any sample But Not Throwing Error As
Well????????????????
else:
    pass

```

```

#=====Creating Function for Contrass
Filter=====
def Contrass_filter():
    if Contrass_variable.get()=="Contra":
        Sample_folder = createFolder('%s/Contrass_Effect_Sample/' % (filepath)) # Calling
function to create Folder
        import cv2
        global contrass_Sample_number
        contrass_Sample_number = Sample_Number_R

    def contrast_image():

        for name in range(1, contrass_Sample_number + 1):
            image = cv2.imread(self.filename) # Taking Sample
            contrast = random.uniform(-150,199) # Passing Random number for Diffrent Sample:
            image = cv2.cvtColor(image, cv2.COLOR_BGR2HSV)
            image[:, :, 2] = [
                [max(pixel - contrast, 0) if pixel < 190 else min(pixel + contrast, 255) for pixel in
row] for
                row in image[:, :, 2]]
            image = cv2.cvtColor(image, cv2.COLOR_HSV2BGR)
            cv2.imwrite('%s/Contrass_Effect_Sample/%s.jpg' % (filepath, name), image)

        contrast_image()

#?????????Note:- This Code Is Taking Too Much Time And Genrating Only one Image But Workin
With out Any Syntax Error?????
    else:
        pass

#=====Creating Function for Edge Canny
Filter=====
def Edge_canny_filter():
    if Edge_detect_variable.get()=="cany":
        Sample_folder = createFolder('%s/Edge_Canny_Effect_Sample/' % (filepath)) # Calling
function to create Folder
        import cv2
        global edge_cany_Sample_number
        edge_cany_Sample_number = Sample_Number_R
        def edge_detect_canny_image():

            for name in range(1, edge_cany_Sample_number + 1):
                image = cv2.imread(self.filename) # Taking Sample
                cany_diff1 = random.randint(0, 100) # Passing Random number for Diffrent Sample:
                cany_diff2 = random.randint(0, 100) # Passing Random number for Diffrent Sample:

```



```

        image = cv2.Canny(image,cany_diff1,cany_diff2)
        cv2.imwrite('%s/Edge_Canny_Effect_Sample/%s.jpg' % (filepath, name), image)

    edge_detect_canny_image()
else:
    pass

#=====Creating Function for Transformation Filter=====
def Transformation_filter():
    if Transformation_variable.get()=="Transfom":
        Sample_folder = createFolder(
            '%s/Transform_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2
        import numpy as np

        global transformation_Sample_number
        transformation_Sample_number = Sample_Number_R

        def transformation_image():

            for name in range(1, transformation_Sample_number + 1):
                image = cv2.imread(self.filename)
                rows, cols, ch = image.shape
                ptsx1 = random.randint(0, 500)
                ptsx2 = random.randint(0, 500)
                pts1 = np.float32([[ptsx1, ptsx2], [200, 50], [50, 200]])
                pts2 = np.float32([[10, 100], [200, 50], [100, 250]])
                M = cv2.getAffineTransform(pts1, pts2)
                image = cv2.warpAffine(image, M, (cols, rows))

                cv2.imwrite('%s/Transform_Effect_Sample/%s.jpg' % (filepath, name), image)

        transformation_image()
    else:
        pass

#=====Creating Function for Embossed Filter=====
def crop():
    if Emboss_variable.get()=="embs":
        Sample_folder = createFolder('%s/Crop_Sample/' % (filepath)) # Calling function to create
Folder
        import cv2
        import numpy as np
        global crop_Sample_number
        crop_Sample_number = Sample_Number_R

```

```

for name in range(1,crop_Sample_number + 1):
    image = cv2.imread(self.filename)
    "x = random.uniform(.01, .99)
    y = random.uniform(.01, .99)"
    x = random.uniform(.01, .50)
    y = random.uniform(.60, .99)

    height, width = image.shape[:2]
    start_row, start_col = int(height * x), int(width * x)

    end_row, end_col = int(height * y), int(width * y)

    cropped = image[start_row:end_row, start_col:end_col]
    cv2.imwrite('%s/Crop_Sample/%s.jpg' % (filepath, name),cropped)
else:
    pass

#=====Creating Function for Translation
Filter=====
def Translation_filter():
    if Translation_variable.get()=="Translation":
        Sample_folder = createFolder(
            '%s/Translation_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2
        import numpy as np
        global translation_Sample_number
        translation_Sample_number = Sample_Number_R

    def translation_image():
        image = cv2.imread(self.filename) # Taking Sample
        translation_diff1 = random.uniform(-150,150) # Passing Random number for Diffrent
        translation_diff2 = random.uniform(-150,150) # Passing Random number for Diffrent

        rows, cols, c = image.shape
        M = np.float32([[1,0,translation_diff1], [0, 1,translation_diff2]])
        image = cv2.warpAffine(image, M, (cols, rows))
        cv2.imwrite('%s/Translation_Effect_Sample/%s.jpg' % (filepath, name), image)

    for name in range(1,translation_Sample_number + 1):
        translation_image()
else:
    pass

#=====creating function for salt Filter=====

```

```

def Salt_filter():
    if salt_and_paper_variable.get()=="Salt_paper":
        Sample_folder = createFolder(
            '%s/Salt_Effect_Sample/' % (filepath)) # Calling function to create Folder
        global edge_cany_Sample_number
        edge_cany_Sample_number = Sample_Number_R
        import numpy as np
        import cv2

        for name in range(1, edge_cany_Sample_number + 1):
            image = cv2.imread(self.filename) # Taking Sample
            color3 = random.randint(50, 200)
            color1 = random.randint(50, 200)
            color2 = random.randint(50, 200)
            height, width = image.shape[:2]
            radius_value = random.randint(10, 50)
            position_circle = random.randint(50, height)
            position_circle = random.randint(50, width)
            cv2.circle(image, center=(position_circle, position_circle), radius=radius_value,
                color=(color1, color2, color3), thickness=-10)
            cv2.imwrite('%s/Salt_Effect_Sample/%s.jpg' % (filepath, name), image)
        else:
            pass

#=====Creating Function for Sharp Filter=====
def Sharp_filter():
    if Sharp_variable.get()=="Sharp_value":
        global edge_cany_Sample_number
        edge_cany_Sample_number = Sample_Number_R
        Sample_folder = createFolder(
            '%s/Pencil_Shade_Sample/' % (filepath)) # Calling function to create Folder
        import cv2
        #import numpy as np
        import random

        def sharpen_image():
            for name in range(1, edge_cany_Sample_number + 1):
                #image = cv2.imread(self.filename) # Taking Sample
                color_image = cv2.imread(self.filename)
                sm = random.randint(1, 150)
                sr = random.uniform(0.009, 0.9)
                cartoon_image1, bawla = cv2.pencilSketch(color_image, sigma_s=sm, sigma_r=sr,
                    shade_factor=0.02)
                cv2.imshow('cartoon', cartoon_image1)
                cv2.imwrite('%s/Pencil_Shade_Sample/%s.jpg' % (filepath, name), cartoon_image1)

```

```

        sharpen_image()
# ??????????Note:- Generating only one sample????????????????

    else:
        pass

#=====Creating function for Dilation Filter=====
def Dilation_filter():
    if dilation_variable.get()=="dilation_value":
        global dela_cany_Sample_number
        dela_cany_Sample_number = Sample_Number_R
        Sample_folder = createFolder(
            '%s/Dilation_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2
        import numpy as np

        def dilation_image():
            for name in range(1, dela_cany_Sample_number + 1):
                image = cv2.imread(self.filename) # Taking Sample
                dila_diff1 = random.randint(0,51) # Passing Random number for Diffrent Sample:
                dila_diff2 = random.randint(0,51) # Passing Random number for Diffrent Sample:
                kernel = np.ones((dila_diff1, dila_diff2), np.uint8)
                image = cv2.dilate(image, kernel, iterations=1)
                cv2.imwrite('%s/Dilation_Effect_Sample/%s.jpg' % (filepath, name), image)

        dilation_image()
# ??????????Note:- Generating only one sample????????????????

    else:
        pass

#=====Creating function for Blure Filter=====
def Blure_filter():
    if Blure_variable.get()=="Blure_value":
        global dela_cany_Sample_number
        dela_cany_Sample_number = Sample_Number_R
        Sample_folder = createFolder(
            '%s/Blure_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2

        def averageing_blur():
            for name in range(1, dela_cany_Sample_number + 1):
                image = cv2.imread(self.filename) # Taking Sample
                avgBlur_diff1 = random.randint(1,41) # Passing Random number for Diffrent Sample:

```

```

        avgBlur_diff2 = random.randint(1, 41)
        image = cv2.blur(image, (avgBlur_diff1, avgBlur_diff2))

        cv2.imwrite('%s/Blure_Effect_Sample/%s.jpg' % (filepath, name), image)

    averageing_blur()
# ??????????Note:- Generating only one sample????????????????
    else:
        pass

#=====Creating Function for Black Hat Filter=====
def cartoon():
    if Black_hat_variable.get()=="Black_hat_value":
        Sample_folder = createFolder(
            '%s/Black_Hat_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2
        import numpy as np
        global black_Hat_Sample_number
        black_Hat_Sample_number = Sample_Number_R

        for name in range(1, black_Hat_Sample_number + 1):
            image = cv2.imread(self.filename) # Taking Sample
            sm = random.randint(1,1000)
            sr = random.uniform(0.001,1.99)
            image1 = cv2.stylization(image, sigma_s=sm, sigma_r=sr)

            #cv2.imwrite('%s/Test_Sample/%s.jpg' % (filepath, name), image)
            cv2.imwrite('%s/Black_Hat_Effect_Sample/%s.jpg' % (filepath, name), image1)
# ??????????Note:- Generating only one sample????????????????
    else:
        pass

#=====Creating function for Top Hat Filter=====
def Top_Hat_filter():
    if Top_hat_variable.get()=="Top_hat_value":
        Sample_folder = createFolder(
            '%s/Top_Hat_Effect_Sample/' % (filepath)) # Calling function to create Folder
        import cv2
        import numpy as np
        global top_Hat_Sample_number
        top_Hat_Sample_number = Sample_Number_R

        for name in range(1, top_Hat_Sample_number + 1):
            image = cv2.imread(self.filename) # Taking Sample
            top_Hat_diff1 = random.randint(200, 500) # Passing Random number for Diffrent

```

Sample:

```
kernel = np.ones((top_Hat_diff1, top_Hat_diff1), np.uint8)
image = cv2.morphologyEx(image, cv2.MORPH_TOPHAT, kernel)

cv2.imwrite('%s/Top_Hat_Effect_Sample/%s.jpg' % (filepath, name), image)

# ??????????Note:- Generating only one sample????????????????
else:
    pass

#=====This is a extra filter add for testing porpus=====
def Test_filter():
    if blank_variable.get()=="test_value":
        Sample_folder = createFolder(
            '%s/Test_Sample/' % (filepath)) # Calling function to create Folder
        global top_Hat_Sample_number
        top_Hat_Sample_number = Sample_Number_R
        import cv2
        for name in range(1, top_Hat_Sample_number + 1):
            image = cv2.imread(self.filename) # Taking Sample
            top_Hat_diff1 = random.randint(1,10) # Passing Random number for Diffrent Sample:
            image = cv2.blur(image, (top_Hat_diff1, top_Hat_diff1))
            cv2.imwrite('%s/Test_Sample/%s.jpg' % (filepath, name), image)
            cv2.imshow("w", image)
            cv2.waitKey(0)
        else:
            pass

#
#-----
#-----Creation function for Data Set
Generating=====
#-----
def download_Button():
    if self.file ==0 or self.path==0:
        if self.file==0:
            messagebox.showwarning("Warning", "Please Upload Semple Image First",
                                   parent=self.root)
        if self.path==0:
            messagebox.showwarning("warning", "Please select path first",
                                   parent=self.root)
    else:
        pass
```



else:

#---Note:- Callig Function in Select Filter Frame-----

```
cv2.imread(Resize_filter())
cv2.imread(Invert_filter())
cv2.imread(Flip_filter())
cv2.imread(Rotate_filter())
cv2.imread(Hue_filter())
cv2.imread(Light_filter())
cv2.imread(Light_color_filter())
cv2.imread(Seturate_filter())
cv2.imread(Addeptive_gaussian_filter())
cv2.imread(Contrass_filter())
cv2.imread(Edge_canny_filter())
cv2.imread(Transformation_filter())
cv2.imread(crop())
cv2.imread(Gray_scale_Filter())
cv2.imread(Translation_filter())
cv2.imread(Salt_filter())
cv2.imread(Sharp_filter())
cv2.imread((Dilation_filter()))
cv2.imread(Blure_filter())
cv2.imread(cartoon())
cv2.imread(Top_Hat_filter())
```

#-----Note:- This Code Is Working Properly-----

#-----Note:- Calling Function in More Filter Frame -----

```
cv2.imread(Test_filter())
```

#

#=====Creating variable to check on value or off value of check

box=====

#-----Note :- These variable are for Select Filter Frame-----

#-----

```
Resize_variable = StringVar()
Flip_variable = StringVar()
Invert_variable = StringVar()
Hue_variable = StringVar()
Rotate_variable = StringVar()
Light_filter_variable = StringVar()
Light_color_filters_variable = StringVar()
Seturate_variable = StringVar()
Addeptive_variable = StringVar()
```

```

Contrass_variable = StringVar()
Edge_detect_variable = StringVar()
Transformation_variable = StringVar()
Emboss_variable = StringVar()
Gray_scale_variable = StringVar()
Translation_variable = StringVar()
salt_and_paper_variable = StringVar()
Sharp_variable = StringVar()
dilation_variable = StringVar()
Blure_variable = StringVar()
Black_hat_variable = StringVar()
Top_hat_variable = StringVar()
#-----Note:- Above Code is working properly-----
blank_variable = StringVar()

```

```

# _____
#-----Putting Buttons on Screen-----
# _____

# _____Show_Feature:- Function For Putting Button On Screen_____
def show_Feature():
    upload_Sample.place(x=290, y=580)
    save_Button.place(x=410, y=580)
    Show_Filter_button.place(x=530, y=580)
    #select_More.place(x=650, y=580)
    hide_button.place(x=650, y=580)
    Generate_Sample.place(x=780, y=580)
    feature_button1.place(x=900, y=580)

# _____Hide_Feature:- Fucntion to Hide Feature Button From Screen_____
def hide_Feature():
    upload_Sample.place_forget()
    save_Button.place_forget()
    Show_Filter_button.place_forget()
    #select_More.place_forget()
    hide_button.place_forget()
    feature_button1.place_forget()
    Generate_Sample.place_forget()

def Hide_the_chk_2():
    chk_size.place_forget()

```



```
chk_invert.place_forget()
chk_crop.place_forget()
chk_blure.place_forget()
chk_hue.place_forget()
chk_light.place_forget()
chk_light_color.place_forget()
chk_setu.place_forget()
chk_gray.place_forget()
chk_addeptive.place_forget()
chk_Contrass.place_forget()
chk_Edge_cany.place_forget()
Transfom_check.place_forget()
chk_emboss.place_forget()
chk_Translation.place_forget()
chk_salt_paper.place_forget()
chhk_Sharp.place_forget()
chhk_dilation.place_forget()
Chk_Blure.place_forget()
chhk_Black_hat.place_forget()
```

#\_\_\_\_\_Hide\_Check:- Fucntion for Hiding Check Box\_\_\_\_\_

```
def Hide_the_chk_buttons():
    chk_size.place_forget()
    chk_invert.place_forget()
    chk_crop.place_forget()
    chk_blure.place_forget()
    chk_hue.place_forget()
    chk_light.place_forget()
    chk_light_color.place_forget()
    chk_setu.place_forget()
    chk_gray.place_forget()
    chk_addeptive.place_forget()
    chk_Contrass.place_forget()
    chk_Edge_cany.place_forget()
    Transfom_check.place_forget()
    chk_emboss.place_forget()
    chk_Translation.place_forget()
    chk_salt_paper.place_forget()
    chhk_Sharp.place_forget()
    chhk_dilation.place_forget()
    Chk_Blure.place_forget()
    chhk_Black_hat.place_forget()
    Chk_Test.place_forget()
    # -----Checking User input image exist or not -----
    if self.sample_Image == 0:
        self.defaultImage2.place_forget()
```

```

        self.defaultImage.place(x=310, y=280)
    else:
        # -----Placing 700x270 image on screen-----
        self.Filter_user_Sample.place_forget()
        self.default_User_sample.place(x=310, y=280)
        Check_blank.place_forget()

#_____More_Filter:- Function for putting some extra filter on screen
def more_Filter():
    Check_blank.deselect()
    Check_blank.place(x=600, y=280)

    chk_size.place_forget()
    chk_invert.place_forget()
    chk_crop.place_forget()
    chk_blure.place_forget()
    chk_hue.place_forget()
    chk_light.place_forget()
    chk_light_color.place_forget()
    chk_setu.place_forget()
    chk_gray.place_forget()
    chk_addeptive.place_forget()
    chk_Contrass.place_forget()
    chk_Edge_cany.place_forget()
    Transfom_check.place_forget()
    chk_emboss.place_forget()
    chk_Translation.place_forget()
    chk_salt_paper.place_forget()
    chhk_Sharp.place_forget()
    chhk_dilation.place_forget()
    Chk_Blure.place_forget()
    chhk_Black_hat.place_forget()
    Chk_Test.place_forget()

    # -----Checking User input image exist or not -----
    if self.sample_Image == 0:
        self.defaultImage.place_forget()
        self.defaultImage2.place(x=310, y=280)
    else:
        self.default_User_sample.place_forget()
        self.defaultImage.place_forget()

        self.Filter_user_Sample.place(x=310, y=280)

#_____Filter_Show:-Function For Putting CCheck Button On Screen_____
def Filter_show():

```

```
# -----Creating Resized Filter Check Box ----- 1
chk_size.deselect()
chk_size.place(x=600, y=280)

# -----Creating Invert Filter Check Box ----- 2
chk_invert.deselect()
chk_invert.place(x=600, y=315)

# -----Creating flip Filter Check Box ----- 3
chk_crop.deselect()
chk_crop.place(x=600, y=350)

# -----Creating Rotate Filter Check Box ----- 4
chk_blure.deselect()
chk_blure.place(x=600, y=385)

# -----Creating Hue Filter Check Box ----- 5
chk_hue.deselect()
chk_hue.place(x=600, y=420)

# -----Creating ligth Filter Check Box ----- 6
chk_light.deselect()
chk_light.place(x=600, y=455)

# -----Creating ligth color Filter Check Box ----- 7
chk_light_color.deselect()
chk_light_color.place(x=600, y=490)

# -----Creating Seturation Filter Image Filter Check Box ----- 8
chk_setu.deselect()
chk_setu.place(x=770, y=280)

# -----Creating Gray Scale Filter Check Box ----- 9
chk_gray.deselect()
chk_gray.place(x=770, y=315)

# -----Creating Adeptive Gaussian Check Box ----- 10
chk_addeptive.deselect()
chk_addeptive.place(x=770, y=350)

# -----Creating Contrass Check Box ----- 11
chk_Contrass.deselect()
chk_Contrass.place(x=770, y=385)

# -----Creating Edge Detect Canny Check Box ----- 12
```

```

chk_Edge_cany.deselect()
chk_Edge_cany.place(x=770, y=420)

# -----Creating Transformation Check Box ----- 13
Transfom_check.deselect()
Transfom_check.place(x=770, y=455)

# -----Creating Emboss Check Box ----- 14
chk_emboss.deselect()
chk_emboss.place(x=770, y=490)

# -----Creating Translation Filter Check Box ----- 15
chk_Translation.deselect()
chk_Translation.place(x=940, y=280)

# -----Creating Salt And Paper Check Box ----- 16
chk_salt_paper.deselect()
chk_salt_paper.place(x=940, y=315)

# -----Creating Sharp Check Box ----- 17
chhk_Sharp.deselect()
chhk_Sharp.place(x=940, y=350)

# -----Creating Blank Check Box ----- 18
chhk_dilation.deselect()
chhk_dilation.place(x=940, y=385)

# -----Creating Blank Check Box ----- 19
Chk_Blure.deselect()
Chk_Blure.place(x=940, y=420)

# -----Creating Blank Check Box ----- 20
chhk_Black_hat.deselect()
chhk_Black_hat.place(x=940, y=455)

# -----Creating Blank Check Box ----- 21
Chk_Test.deselect()
Chk_Test.place(x=940, y=490)

# -----Checking User input image exist or not -----
if self.sample_Image == 0:
    self.defaultImage.place_forget()
    self.defaultImage2.place(x=310, y=280)
else:
    self.default_User_sample.place_forget()
    self.defaultImage.place_forget()

```

```

self.Filter_user_Sample.place(x=310, y=280)

#-----Removing Blank Check Box-----
Check_blank.place_forget()

#=====
=====
#_____FRONT END
CODE_____
#-----Front end code in written here but packed in back end code -----
--
#=====
=====

#_____
#=====Main-Background=====
#-----
self.bg = ImageTk.PhotoImage(file="bg.png")
main_Background = Label(self.root, image=self.bg).place(x=0, y=0, relwidth=1, relheight=1)

#_____
#=====Sub-Background=====
#-----
self.left = ImageTk.PhotoImage(file="aug1.png")
left = Label(self.root, image=self.left).place(x=220, y=130, width=900, height=500)

#-----
#-----Creating CheckBox -----
#-----
# -----Creating Resized Filter Check Box ----- 1
chk_size = Checkbutton(left, text="Resize", variable=Resize_variable, bg="#4e4e4e",
onvalue="Resize", offvalue=0,

font=("time new roman", 12))

# -----Creating Invert Filter Check Box ----- 2
chk_invert = Checkbutton(left, text="invert", variable=Invert_variable, onvalue="invert",
offvalue=0,

bg="#4e4e4e",
font=("time new roman", 12))

# -----Creating flip Filter Check Box ----- 3
chk_crop = Checkbutton(left, text="Flip", variable=Flip_variable, onvalue="flip", offvalue=0,

```

```

        bg="#4e4e4e", font=("time new roman", 12))

# -----Creating Rotate Filter Check Box ----- 4
chk_blure = Checkbutton(left, text="Rotate", variable=Rotate_variable, onvalue="rotate",
offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

# -----Creating Hue Filter Check Box ----- 5
chk_hue = Checkbutton(left, text="Hue", variable=Hue_variable, onvalue="hue", offvalue=0,
bg="#4e4e4e",
                        font=("time new roman", 12))

# -----Creating lighth Filter Check Box ----- 6
chk_light = Checkbutton(left, text="Light", variable=Light_filter_variable, onvalue="light",
offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

# -----Creating lighth color Filter Check Box ----- 7
chk_light_color = Checkbutton(left, text="Light Color", variable=Light_color_filters_variable,
onvalue="IColor",
offvalue=0, bg="#4e4e4e",
font=("time new roman", 12))

# -----Creating Saturation Filter Image Filter Check Box ----- 8
chk_setu = Checkbutton(left, text="Saturation", variable=Seturate_variable,
onvalue="Seturate_Image",
offvalue=0, bg="#4e4e4e", font=("time new roman", 12))

# -----Creating Adeptive Gaussian Check Box ----- 10
chk_addeptive = Checkbutton(left, text="Addeptive_gaussian", variable=Addeptive_variable,
onvalue="addept",
offvalue=0,
bg="#4e4e4e",
font=("time new roman", 12))

# -----Creating Gray Scale Filter Check Box ----- 9
chk_gray = Checkbutton(left, text="Gray Scale", variable=Gray_scale_variable,
onvalue="Gray", offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

# -----Creating Contrass Check Box ----- 11
chk_Contrass = Checkbutton(left, text="Contrass", variable=Contrass_variable,

```



```

onvalue="Contra", offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

# -----Creating Edge Detect Canny Check Box ----- 12
chk_Edge_cany = Checkbutton(left, text="Edge Canny", variable=Edge_detect_variable,
onvalue="cany", offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

# -----Creating Transformation Check Box ----- 13
Transfom_check = Checkbutton(left, text="Transformation", variable=Transformation_variable,
    onvalue="Transfom", offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

# -----Creating Emboss Check Box ----- 14
chk_emboss = Checkbutton(left, text="Crop", variable=Emboss_variable, onvalue="embs",
offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

# -----Creating Translation Filter Check Box ----- 15
chk_Translation = Checkbutton(left, text="Translation", variable=Translation_variable,
    onvalue="Translation", offvalue=0,
    bg="#4e4e4e", font=("time new roman", 12))

# -----Creating Salt And Paper Check Box ----- 16
chk_salt_paper = Checkbutton(left, text="Salt_And Paper", variable=salt_and_paper_variable,
    onvalue="Salt_paper", offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

# -----Creating Sharp Check Box ----- 17
chhk_Sharp = Checkbutton(left, text="Sharp", variable=Sharp_variable, onvalue="Sharp_value",
offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

# -----Creating Blank Check Box ----- 18
chhk_dilation = Checkbutton(left, text="Dilation", variable=dilation_variable,
onvalue="dilation_value",
    offvalue=0,
    bg="#4e4e4e",
    font=("time new roman", 12))

```

```

# -----Creating Blank Check Box ----- 19
Chk_Blure = Checkbutton(left, text="Blure", variable=Blure_variable, onvalue="Blure_value",
offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

# -----Creating Blank Check Box ----- 20
chhk_Black_hat = Checkbutton(left, text="Black Hat", variable=Black_hat_variable,
onvalue="Black_hat_value",
                        offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

# -----Creating Blank Check Box ----- 21
Chk_Test = Checkbutton(left, text="Top_Hat", variable=Top_hat_variable,
onvalue="Top_hat_value", offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

#-----Some Extra Filter-----
# -----Creating Blank Check Box -----
Check_blank = Checkbutton(left,text="Test", variable=blank_variable, onvalue="test_value",
offvalue=0,
                        bg="#4e4e4e",
                        font=("time new roman", 12))

"# -----Creating All Filter Check Box -----
chk_all = Checkbutton(left, text="All Filter", onvalue=1, offvalue=0, bg="#4e4e4e",
                        font=("time new roman", 12))
chk_all.deselect()
chk_all.place(x=600, y=455)"

#-----
#-----Creating Feature Button-----
#-----

#_____Default_Image:- Importing image to show as default_____
self.result = ImageTk.PhotoImage(file="default_image.jpeg")
self.defaultImage = Label(self.root, image=self.result, bd=1, bg="#4e4e4e", cursor="hand2")

#-----Checking User input image exist or not -----
if self.sample_Image == 0:
    self.defaultImage.place(x=310, y=280)
else:
    pass

```



```

#_____Default_Image :- For Side View in 220x220_____
self.result2 = ImageTk.PhotoImage(file="default_image2.jpeg")
self.defaultImage2 = Label(self.root, image=self.result2, bd=1, bg="#4e4e4e", cursor="hand2")

#_____Show_Feature:- _____Creating Button To Display Feature Button_____
self.feature_Image = ImageTk.PhotoImage(file="Show.png")
feature_button = Button(self.root,activebackground="#4e4e4e", image=self.feature_Image,
borderwidth=0, bg="#4e4e4e", command=show_Feature)
feature_button.place(x=250,y=580)

#_____Hide_Feature:-____Creating Button To Hide Feature Button_____
self.feature_Image1 = ImageTk.PhotoImage(file="Hide.png")
feature_button1 = Button(self.root, image=self.feature_Image1,activebackground="#4e4e4e",
borderwidth=0, bg="#4e4e4e", command=hide_Feature)

# _____Upload:- creating button to upload sample image_____
self.download = ImageTk.PhotoImage(file="Upload.png")
upload_Sample= Button(self.root, image=self.download,activebackground="#4e4e4e",
borderwidth=0 ,bg="#4e4e4e",command=Upload_file)

# _____Set-Path:- creating button to set Path for saving data set_____
self.select_path = ImageTk.PhotoImage(file="Select_path.png")
save_Button = Button(self.root,image=self.select_path,activebackground="#4e4e4e",
borderwidth=0,bg="#4e4e4e",command=savefile)

# _____SelectFilter:- _button is using to show check button Of filter_____
self.select_filter = ImageTk.PhotoImage(file="Select_Filter.png")
Show_Filter_button = Button(self.root,
image=self.select_filter,borderwidth=0,activebackground="#4e4e4e", bg="#4e4e4e",
command=Filter_show)

# _____Select_More:- button is using to get more filters _____
self.more2= ImageTk.PhotoImage(file="More_Filter.png")
select_More = Button(self.root, image=self.more2, bg="#4e4e4e", borderwidth=0,
command=more_Filter)

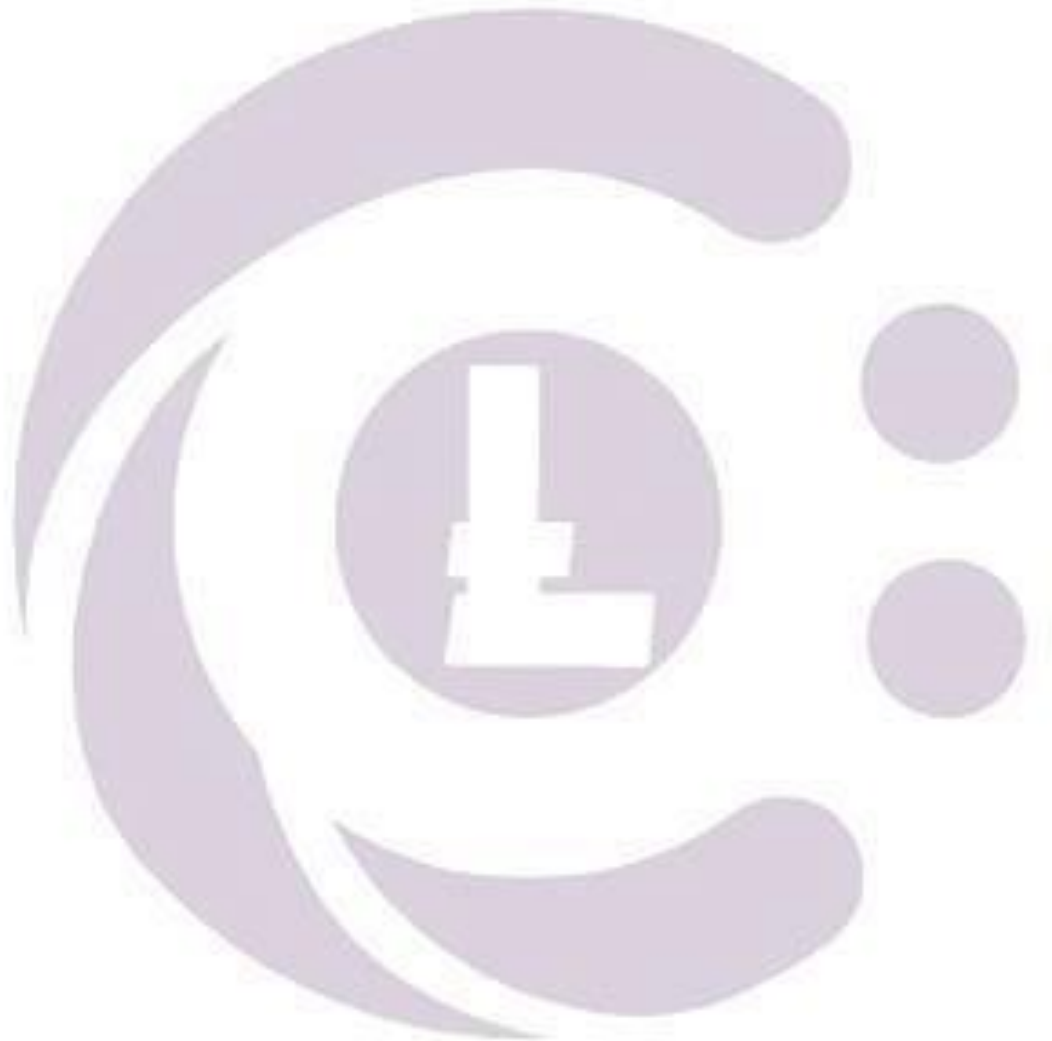
#?????????????????This line May generating error?????????????????

# _____Hide_Filter:- button is using to hide the check buttons _____
self.more1 = ImageTk.PhotoImage(file="Hide_Filter.png")
hide_button = Button(self.root, image=self.more1, bg="#4e4e4e",activebackground="#4e4e4e",
borderwidth=0, command=Hide_the_chk_buttons)

```

```
# ____Download:- Creating button to generate data
set=====
self.generate = ImageTk.PhotoImage(file="Download.png")
Generate_Sample = Button(self.root, image=self.generate, bg="#4e4e4e",
activebackground="#4e4e4e",borderwidth=0, cursor="hand2", command=download_Button)

root=Tk()
obj=Register(root)
root.mainloop()
```



## Read More

```
# _____  
_____  
#-----Importing Required Package(API)-----  
-----  
#-----  
-----  
  
from PIL import ImageTk  
import tkinter as tk  
from tkinter import ttk  
from tkinter import scrolledtext, END  
  
class Register:  
#  
_____  
_____  
# -----FRONT END CODE-----  
-----  
# -----  
-----  
  
#=====Root Function=====  
def __init__(self,root):  
    self.root=root  
    self.root.title("ConsoleLancer")  
    self.root.geometry("1350x740+0+0")  
    # _____  
    # -----Frame And Background-----  
    # -----  
  
    #  
=====Frames=====  
  
#-----First Frame-----  
self.left = ImageTk.PhotoImage(file="Augmentation.png")  
left = tk.Label(self.root, image=self.left)  
left.place(x=0, y=0, width=1350, height=195)  
  
#-----Second Frame-----  
frame2 = tk.Frame(self.root, bd=2, bg="#111d20")  
frame2.place(x=0, y=195, width=300, height=547)  
  
#-----Third Frame-----  
frame3 = tk.Frame(self.root,bg="#eeeef0")
```

```

frame3.place(x=300, y=195,width=1050, height=547)

# -----Buttons-----
# -----

#-----Frame
1=====
    """This frame is containing Header. Which is already deleared & initialized in above
code"""

#-----Button Area [Frame
2]=====

#-----This button will throw you on user login page-----
self.User_Login = ImageTk.PhotoImage(file="User.png")
User =
tk.Button(frame2,image=self.User_Login,activebackground="#111d20",font=("time new
roman", 20, "bold"),command=self.user_page,bd=0,bg="#111d20",fg="#eeeef0",
cursor="hand2")
    User.place(x=5,y=100)

#-----This page will throw you on Admin login page-----
self.Admin_Login = ImageTk.PhotoImage(file="Admin.png")
Admin =
tk.Button(frame2,image=self.Admin_Login,activebackground="#111d20",font=("time
new roman", 20, "bold"),command=self.admin_page ,bd=0,bg="#111d20",fg="#eeeef0",
cursor="hand2")
    Admin.place(x=5,y=200)

#-----Description Area [Frame 3]-----
tk.Label(frame3,

    text="DESCRIPTION",

    font=("time new roman", 20, "bold"),

    background='#eeeef0',

    foreground="gray").place(x=400,y=50)

#-----Creating scrolled
Area=====
    text_area = scrolledtext.ScrolledText(frame3,

        wrap=tk.WORD,

```

```

        width=80,

        height=16,

        font=("Times New Roman",

            15))

text_area.place(x=100,y=100)
#=====Inserting Product Description In Text Area=====

file = open("product_Description.txt","r")    # Reading Product Description
from file

for line in file:
    x = line          # Passing Each line in x to insert in in text area
    text_area.insert(END,x)  # Inserting Each Line in text area

                                # Placing cursor in the text area
text_area.focus()

#
#-----
#-----BACK END CODE-----
#-----
#-----

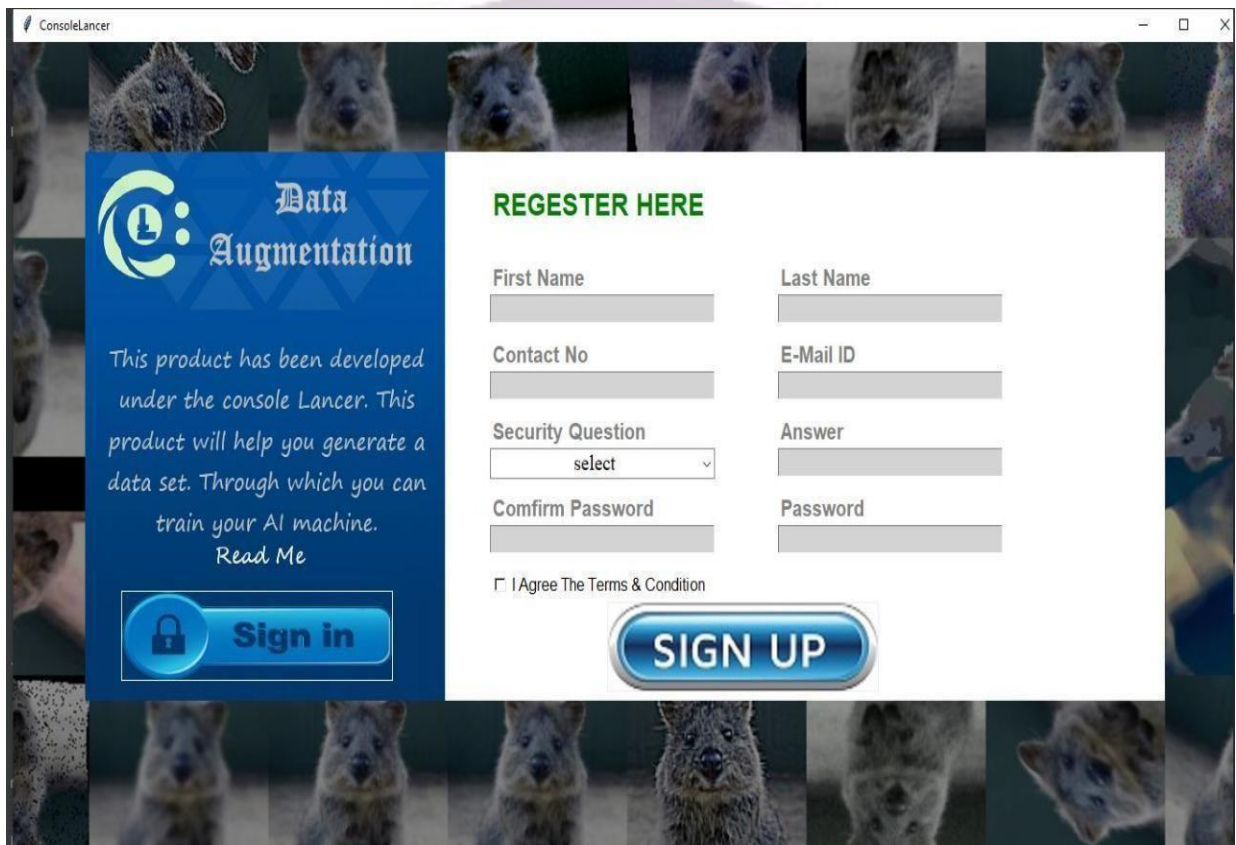
#=====Function to jump on Admin login page=====
def admin_page(self):
    self.root.destroy()
    import Admin_login

#=====Function to jump on User login page=====
def user_page(self):
    self.root.destroy()
    import User_Login

root= tk.Tk()
obj=Register(root)
root.resizable(False, False)
root.mainloop()

```

## SCREENSHOTS



The screenshot shows a web browser window titled "ConsoleLancer". The background of the page is a collage of koala faces. On the left, there is a blue sidebar with the "Data Augmentation" logo and a description of the product. The main content area on the right is titled "REGISTER HERE" and contains a registration form with fields for First Name, Last Name, Contact No, E-Mail ID, Security Question, Answer, and Confirm Password. There are also checkboxes for "I Agree The Terms & Condition" and buttons for "Sign in" and "SIGN UP".

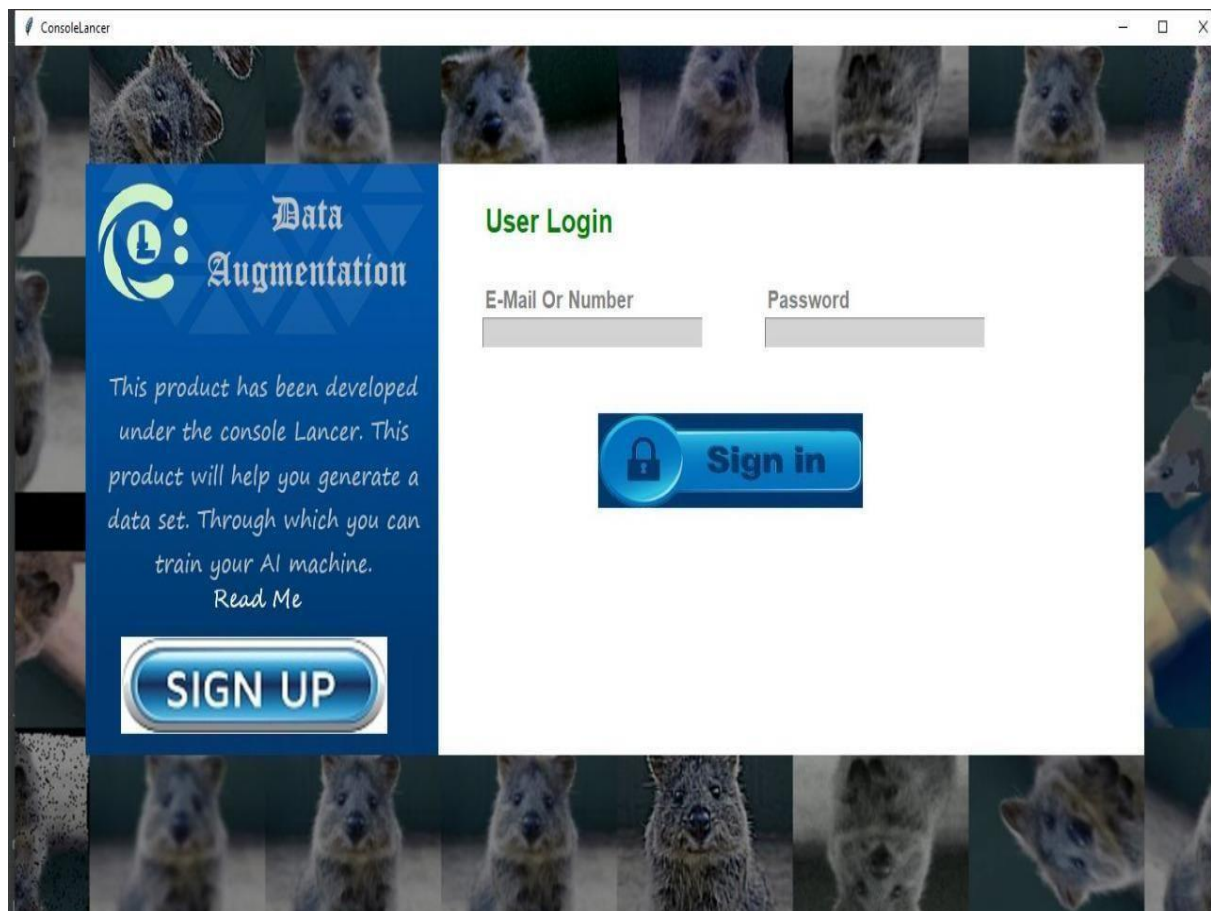
**Data Augmentation**

This product has been developed under the console Lancer. This product will help you generate a data set. Through which you can train your AI machine.  
[Read Me](#)

### REGISTER HERE

First Name	Last Name
<input type="text"/>	<input type="text"/>
Contact No	E-Mail ID
<input type="text"/>	<input type="text"/>
Security Question	Answer
<input type="text" value="select"/>	<input type="text"/>
Confirm Password	Password
<input type="text"/>	<input type="text"/>

☐ I Agree The Terms & Condition



*This product has been developed  
under the console Lancer. This  
product will help you generate a  
data set. Through which you can  
train your AI machine.  
[Read Me](#)*

**SIGN UP**

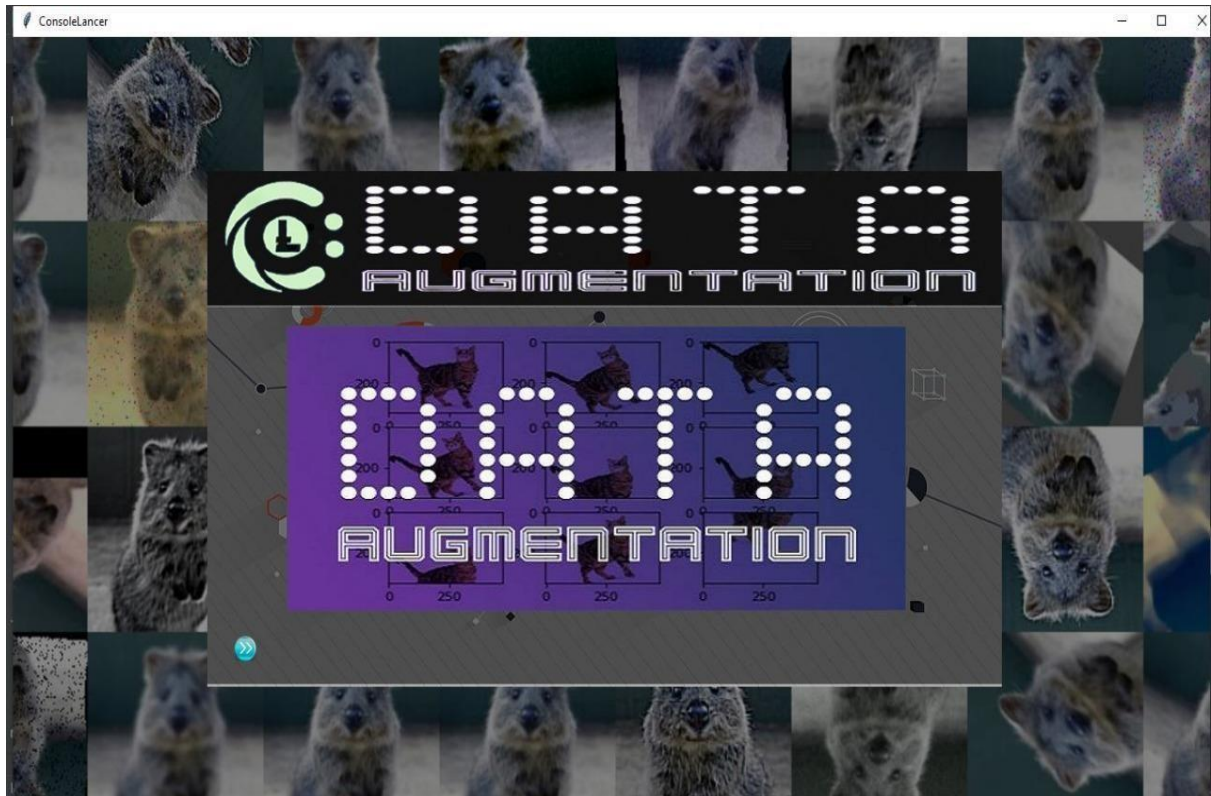
### User Login

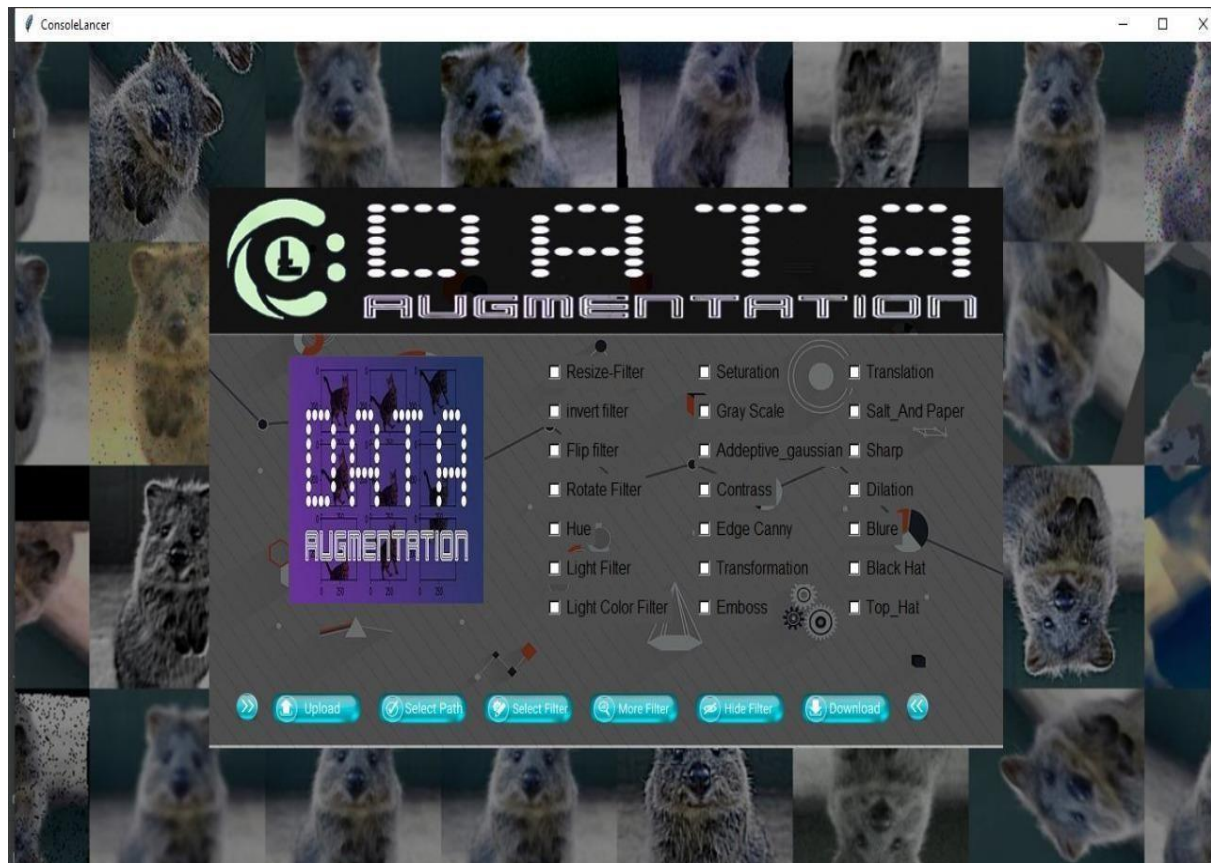
E-Mail Or Number

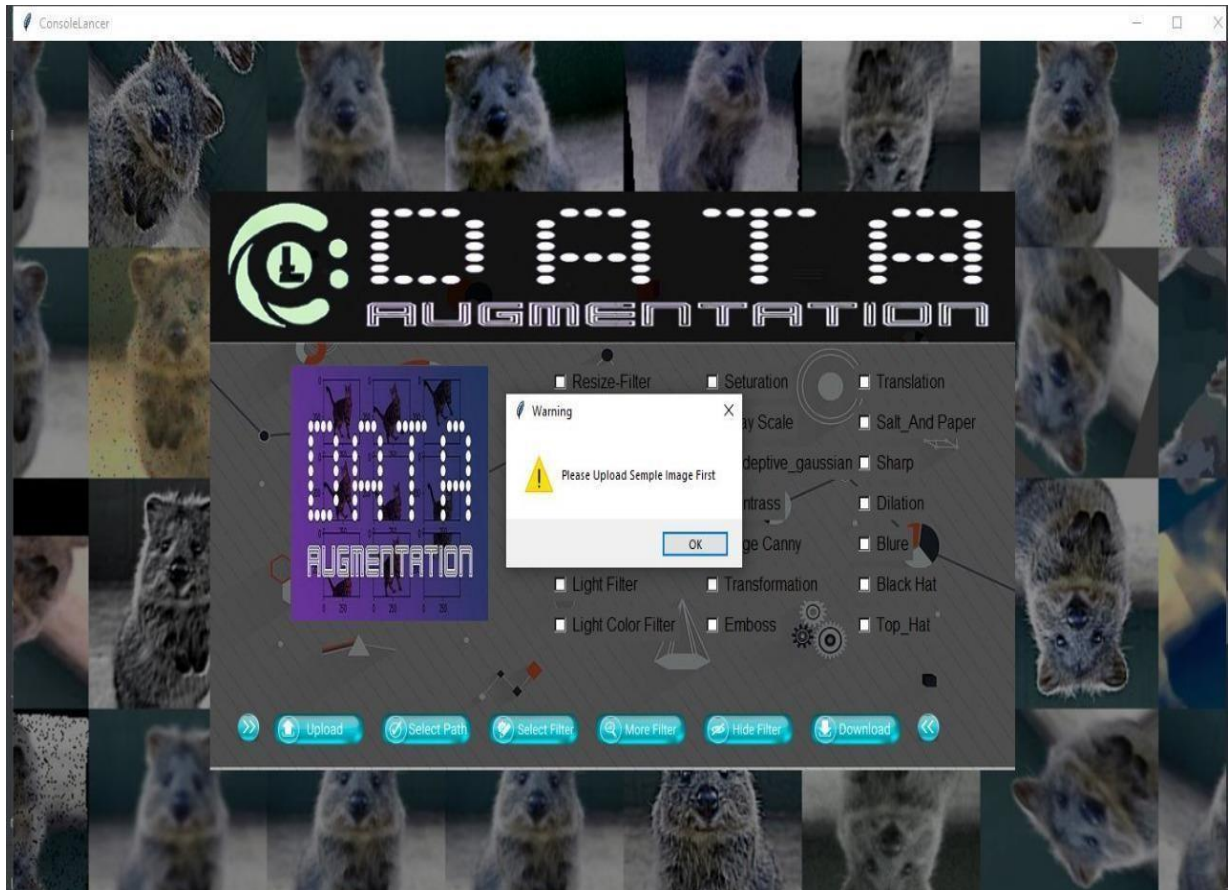
Password

 **Sign in**

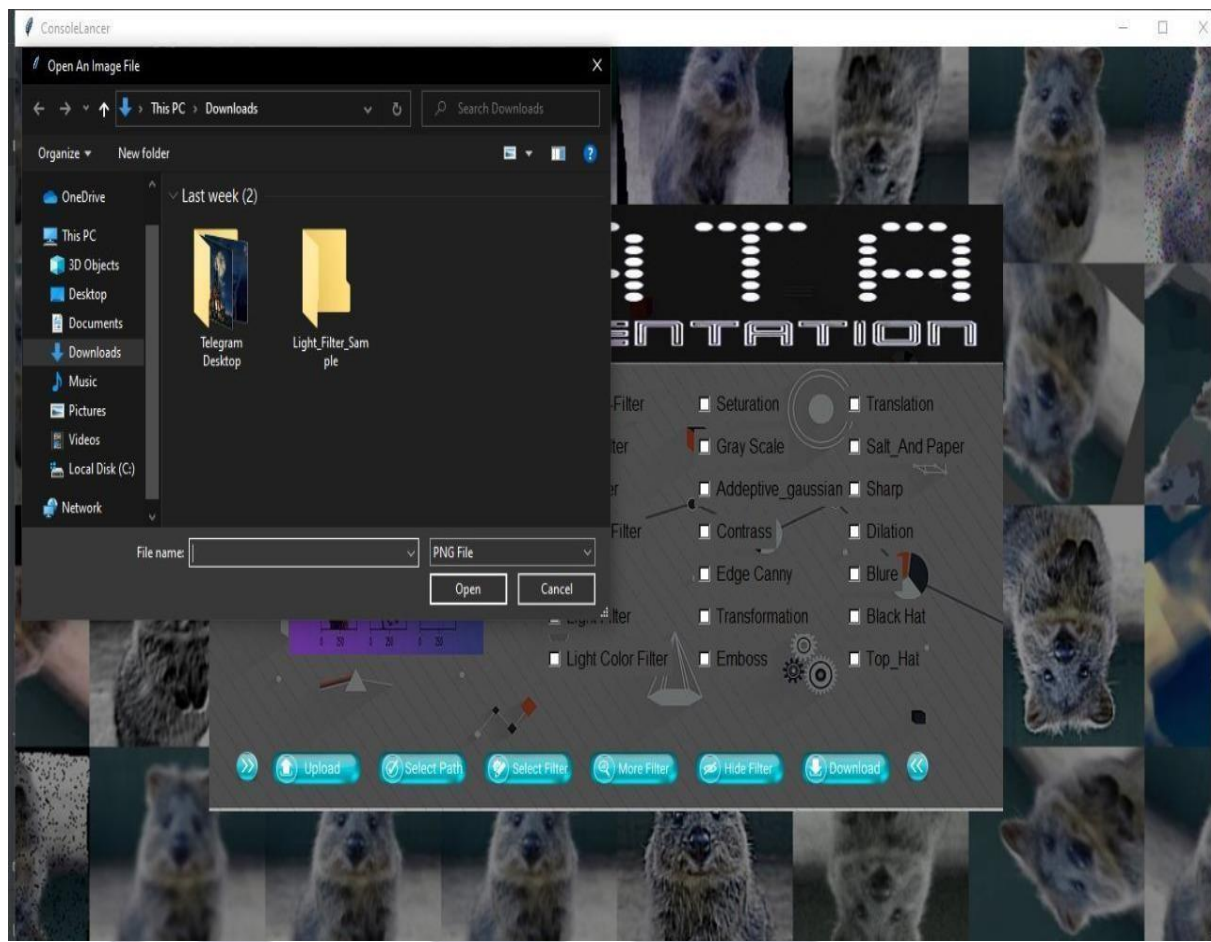


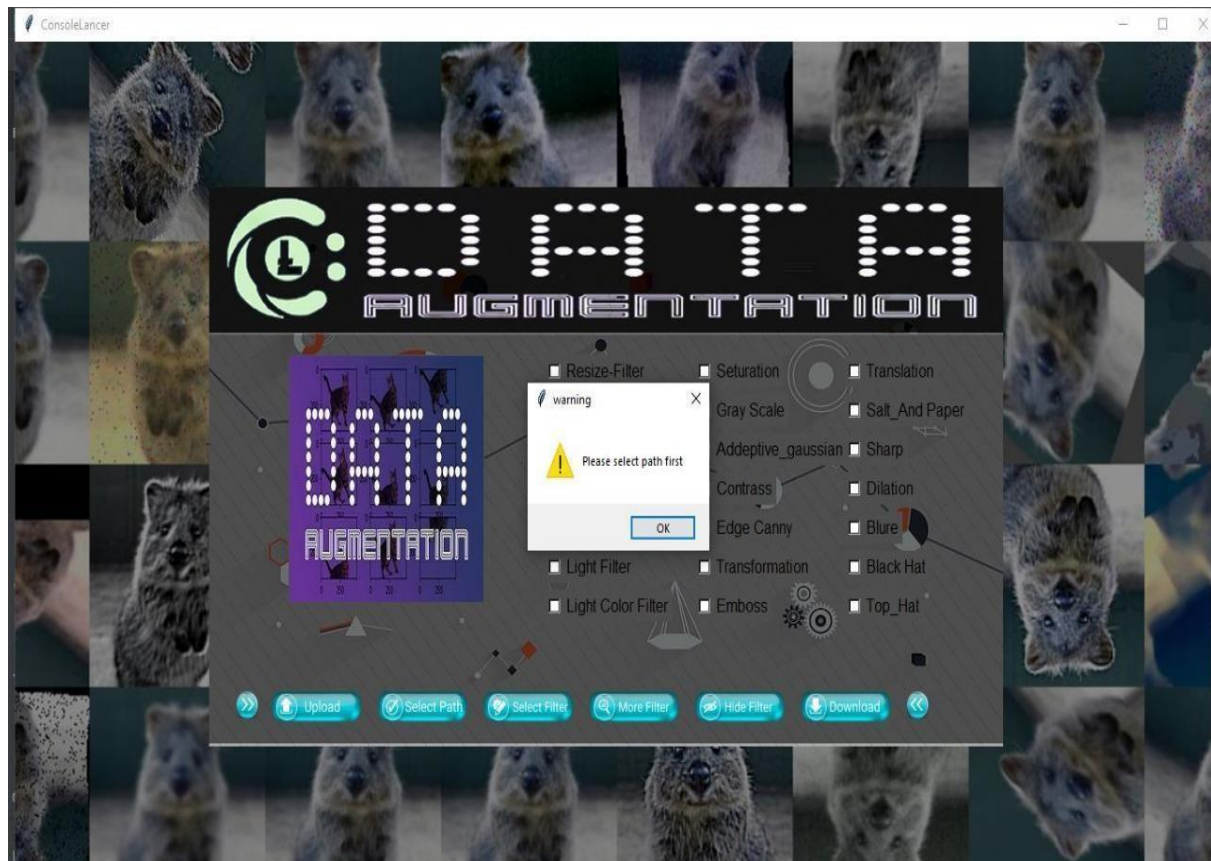


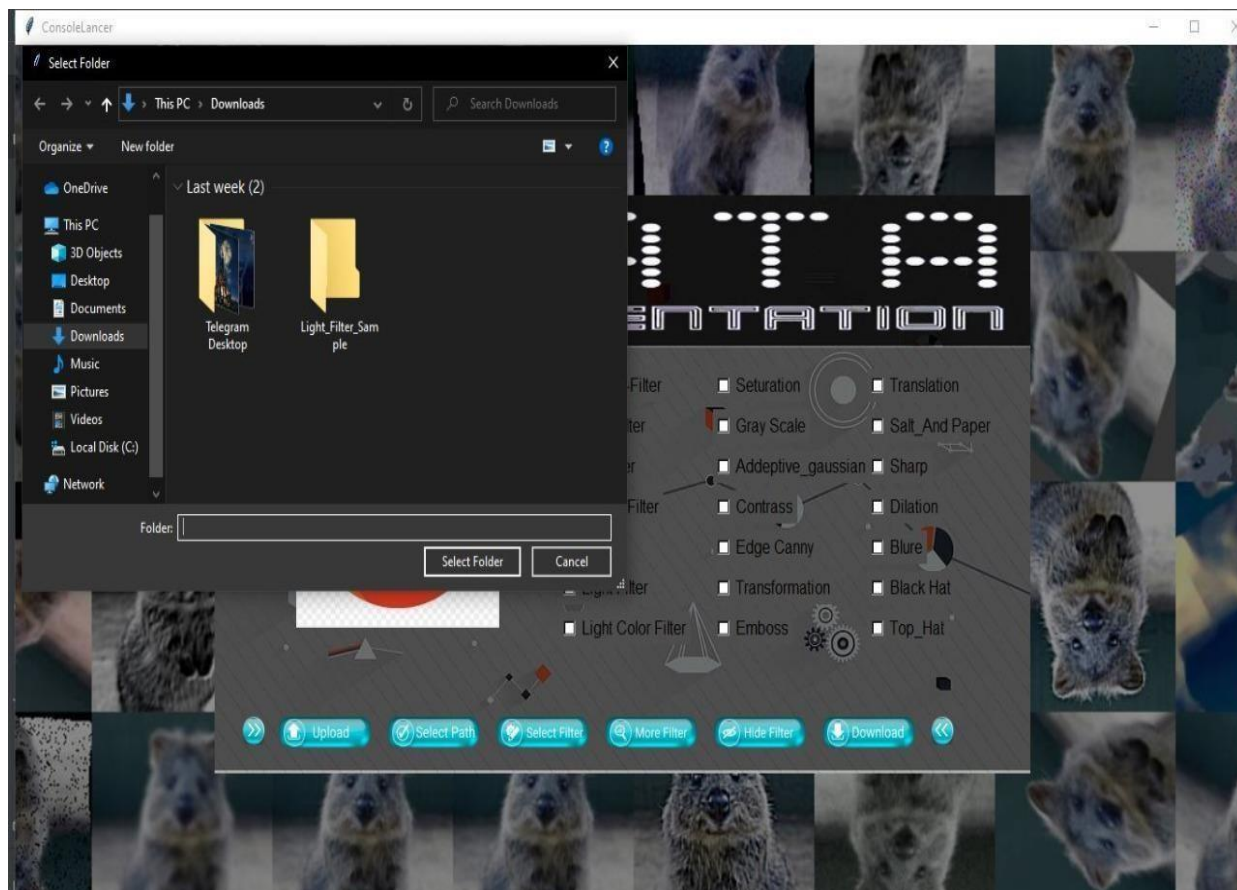




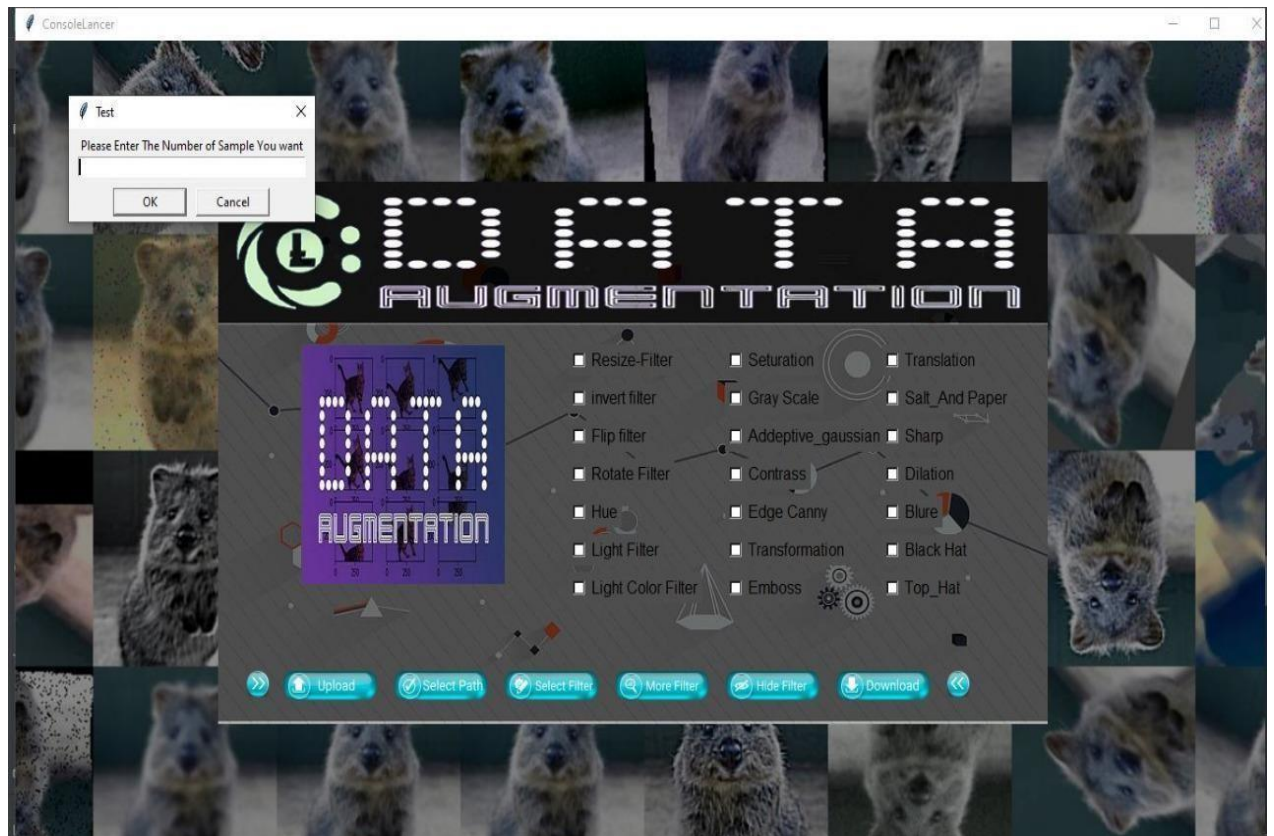




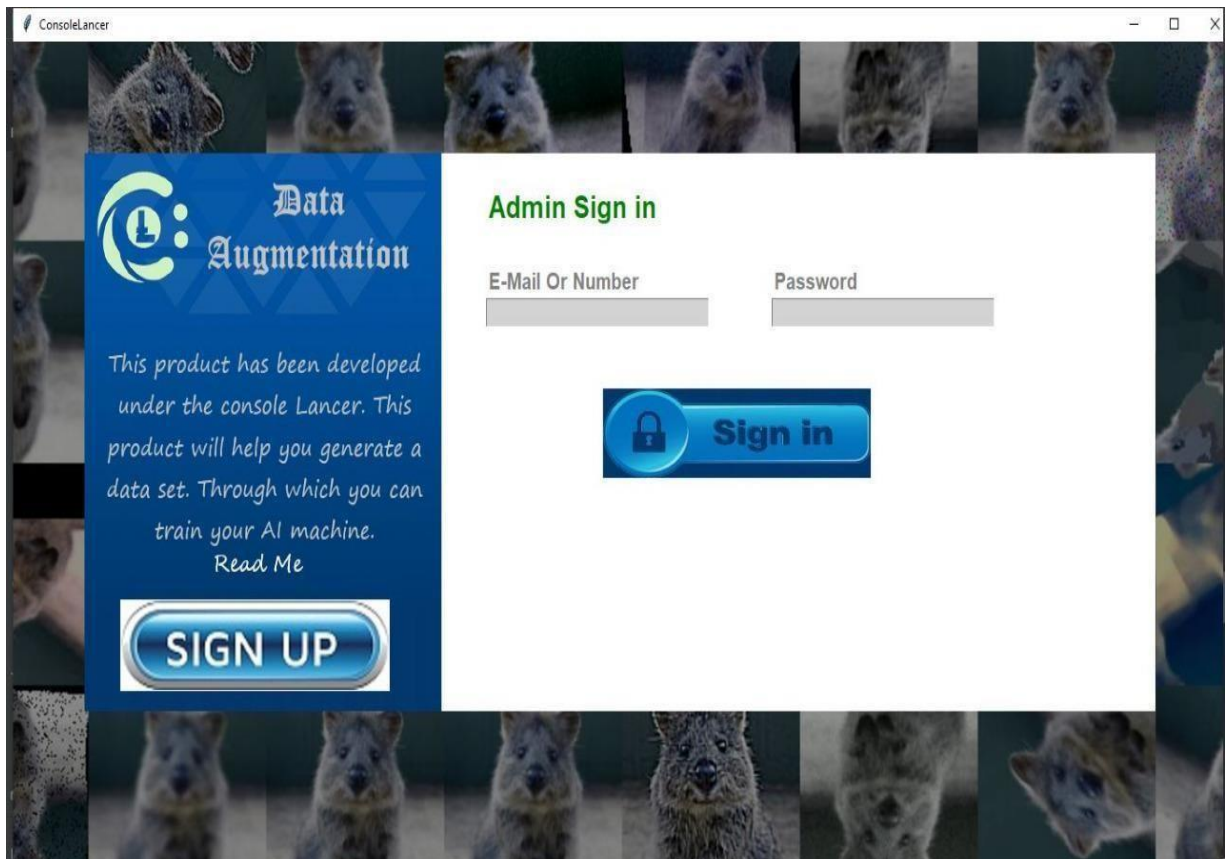


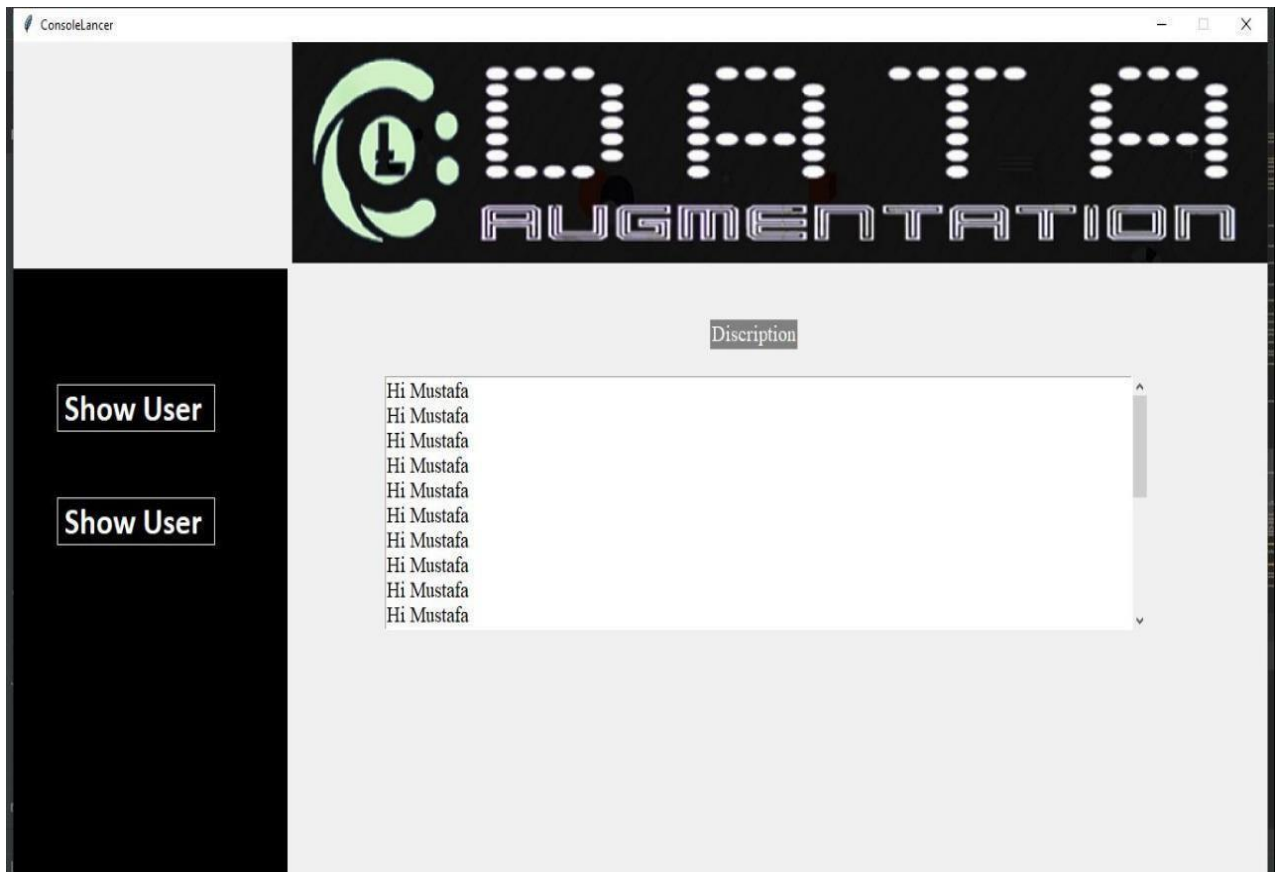












ConsoleLancer



DATA  
AUGMENTATION

Show User

Show User

First Name	Last Name	Phone Number	Email Id
mustafa	hasan	8279861949	mustafahasan555@gmail.com
ashu	hasan	9897161476	mustafa555@gmail.com
Shan	hasan	84827891	shan@gmail.com
mustafa	hasan	987594784	hasan@gmail.com
sony	hasan	56654542342	sony@gmail.com
Shanu	hasan	8439484	Shanu555@gmail.com
tiger	shrop	76576	tiger@gmail.com
dfsfd	efed	ded	edwed

