PROJECT REPORT FOR

GOOGLE IMAGE RECAPTCHA

As a project work for Course

PYTHON PROGRAMMING (INT 213)

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Abstract

The google image ReCAPTCHA project is composed in Python. The project file contains python scripts (main.py) and image files. This is a simple GUI based method board game which is really understandable and make use of.

This project is based upon the concept of, when we try to login into an unauthorized website or to login into a website for the first time it asks for a image recaptcha. So, by using this python project we can login into a website which take the images to select to enter.

The 2D GUI is designed using Tkinter python. The user interface is so simple that the user won't find it difficult to use and understand.

Acknowledgement

I would like to thank my professor Ankita wadhawan, for giving me this opportunity to make this project which helped me in grabbing knowledge in GUI and all my friends who supported in the completion of the project.

GitHub Links

Link 1 : https://github.com/Kothaloknadh/google-image-recaptcha/blob/main/main.py

Link 2 : https://github.com/kumarsainagalla/project/blob/main/pythonproject

Introduction

Python:

The project is developed using Python. Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built-in data structures, combined with dynamic typing and dynamic binding. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms and can be freely distributed.

Tkinter:

Python offers multiple options for developing GUI (Graphical User Interface). Out of all the GUI methods, tkinter is most commonly used method. It is a standard Python interface to the Tk GUI toolkit shipped with Python. Python with tkinter outputs the fastest and easiest way to create the GUI applications. Creating a GUI using tkinter is an easy task. Tkinter includes a number of Python modules. The two most important modules are the Tkinter module itself, and a module called Tkconstants. The former automatically imports the latter, so to use Tkinter, all you need to do is to import one module.

Description of the project

Image Recaptcha:

Internet service providers generally face the risk of authentication-related attacks, spam, Denial-of-Service attacks, and data mining bots. Completely Automated Public Turing test, to tell Computers and Humans apart, popularly known as CAPTCHA, is a challenge-response test created to selectively restrict access to computer systems. As a type of Human Interaction Proof, or a human authentication mechanism, CAPTCHA generates challenges to identify users. In essence, a CAPTCHA test can tell machines/ computers and humans apart. This has caused a heightened adoption of CAPTCHAs across various online businesses and services.

The concept of CAPTCHA depends on human sensory and cognitive skills. These skills enable humans to read a distorted text image or choose specific images from several different images. Generally, computers and computer programs such as bots are not capable of interpreting a CAPTCHA as they generate distorted images with text or numbers, which most Optical Character Recognition (OCR) technologies fail to make sense of. However, with the help of Artificial Intelligence, algorithms are getting smarter, and bots are now capable of cracking these tests. For instance, there are bots that are capable of solving a text CAPTCHA through letter segmentation mechanisms. That said, there aren’t a lot of automated CAPTCHA solving algorithms available.

Detailed Description of the project:

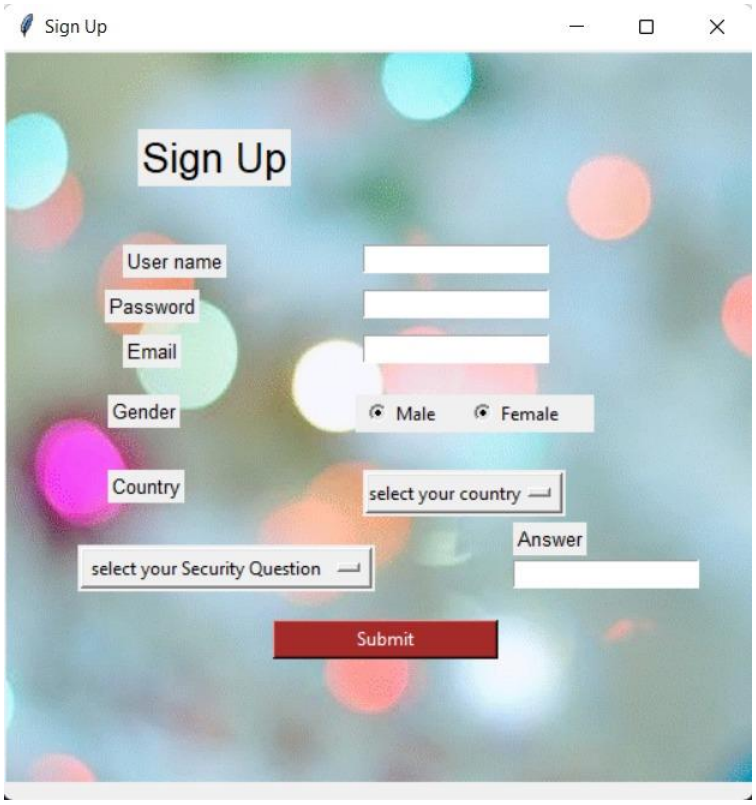
The project interface is built in 2D format. The interface is an interactive window where the user can control from the user end . A console window is created as soon as we start the implementation, where the user can witness the setup of login form, signup form and forgot password form.

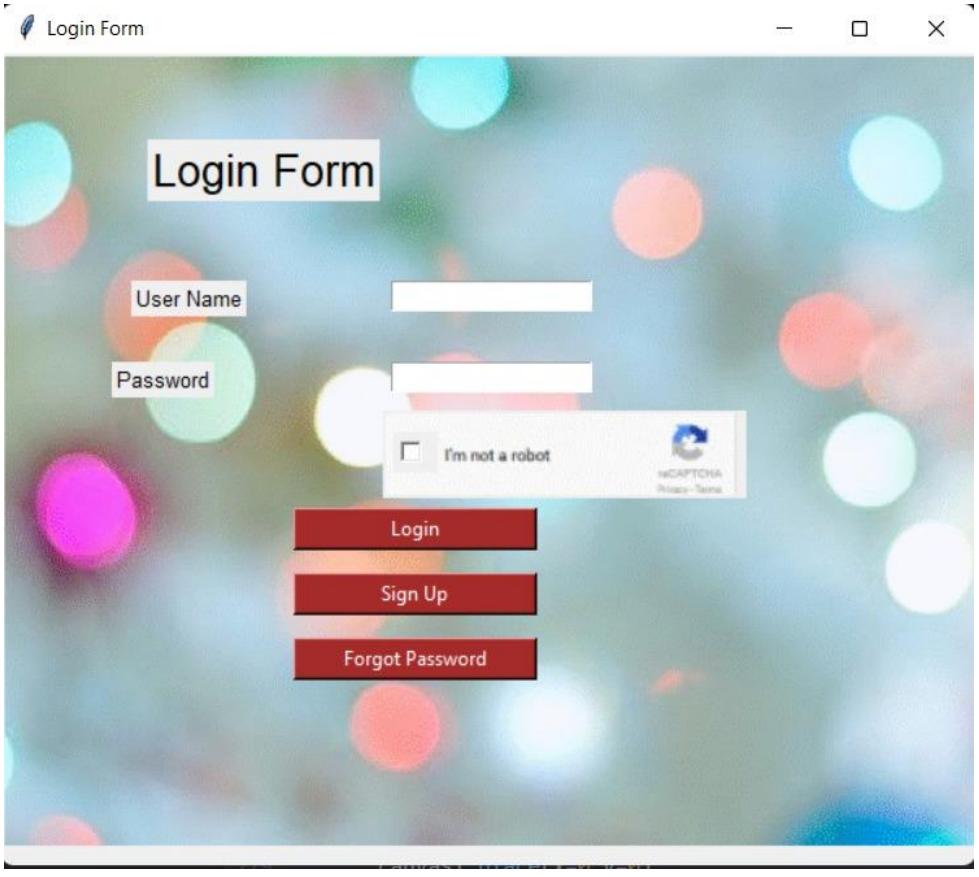
The GUI is developed using Tkinter and various image files are used to create the interface. The interface is divided into various sections and each sections lead up to different functionalities.

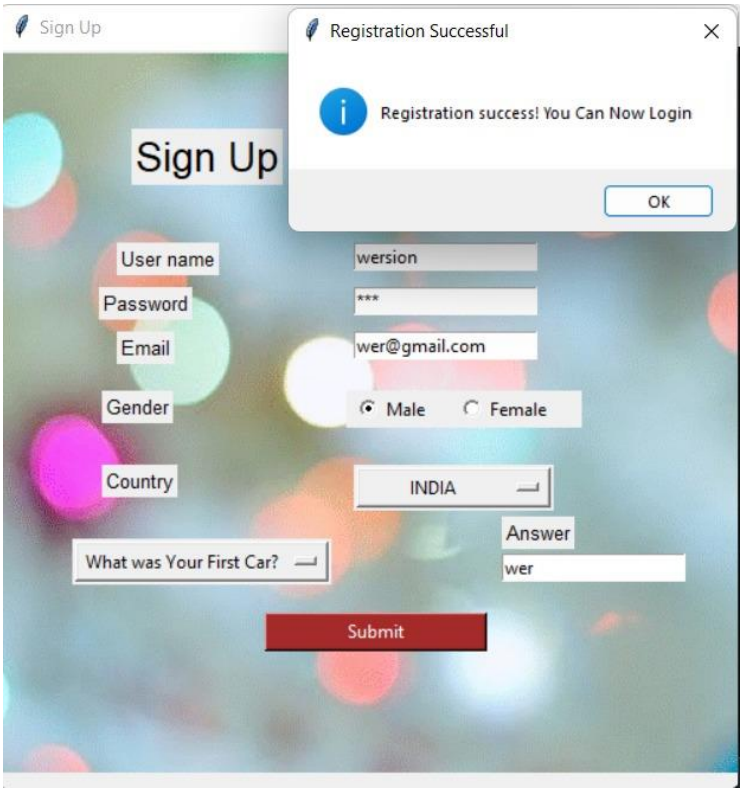
First of all, the user has to sign up with his credentials after that he will be redirected to the login form where he can login using his username and password created in the previous signup form. If the user gives the wrong credentials, the user can use the forgot password option to retrieve his username and password for which user have to submit an email id to verify.

Then the interface will ask to select the random pictures for the image recaptcha, the image selected by the user should be of same type which should satisfy the interface condition if the selected images does not match it will ask again the user to select the images. If the condition satisfies it will pop out a message showing "**verified successfully**".

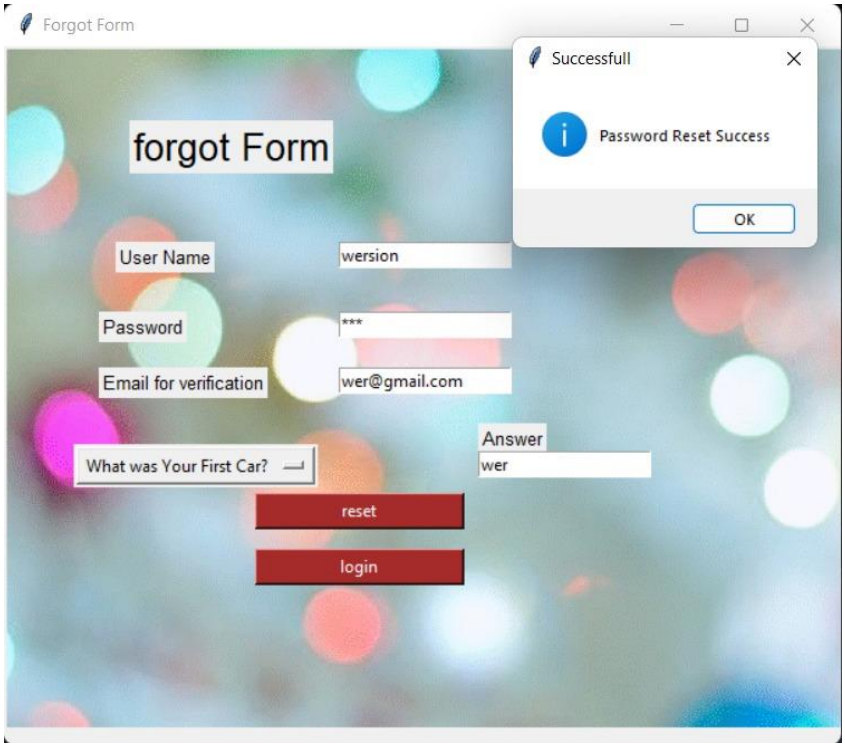
Screenshots:






Sign Up
Registration Successful
Registration success! You Can Now Login
OK
Sign Up
User name
wersion
Password
***
Email
wer@gmail.com
Gender
Male
Female
Country
INDIA
Answer
What was Your First Car?
wer
Submit


Succesfull
Verified Successfully
OK


Forgot Form
forgot Form
User Name
wersion
Password
***
Email for verification
wer@gmail.com
Answer
What was Your First Car?
wer
reset
login
Successfull
Password Reset Success
OK

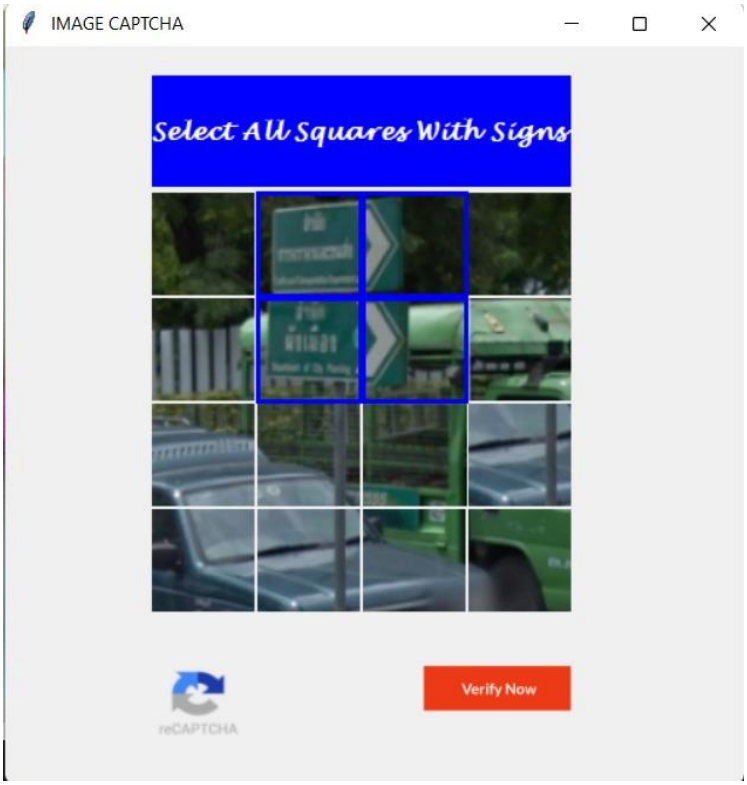


IMAGE CAPTCHA
Select All Squares With Signs
reCAPTCHA
Verify Now

Conclusion:

This project implements an image recaptcha in 2D GUI format. This application allows the user to signup, login and also forget password. It also allows the user to select the images for the acceptance of the recaptcha after that it will redirect to the blank page. It will automatically select the images which belongs to the same category.

By using this project, we can easily login into the unauthorized website.

References:

1. https://cloudsek.com/how-to-bypass-captchas-easily-using-python-and-other-methods/

2. https://www.tutorialspoint.com/python/python_gui_programming.html