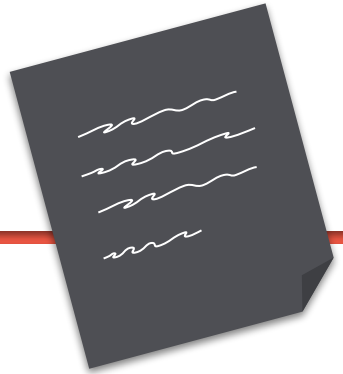
PyPASS

Password Manager

Offline, Feature-rich and easy-to-use!

Under the guidance of Prof. Bhaswati Sahoo



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ABOUT THE PROJECT

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PyPASS is a Password manager which helps people manage their passwords offline. People can be irresponsible as they forget their password, design bad passwords, or are not interested in security, using the same passphrases for each and every account is dangerous as it creates one point of failure.

We, here, are tackling some of the everyday problems including:

1. *Cyber security concerns*
2. *Absence of strong and secure passwords*
3. *Hard to remember those passwords*

Introduction

What is a password manager?

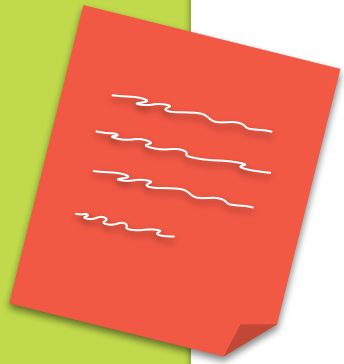
A password manager is an encrypted piece of software or a program that allows users to store, generate, and manage their passwords for local applications and online services, as well as other informations in one convenient location with one master password.

(In simpler terms, A book of all your passwords is locked by a master key that only you know.)

Not only it helps to keep your sensitive data and credentials safe, but it can also generate unique and strong passwords. In this case, you don’t have to keep reusing the same ones across your devices and platforms.

02

Project Objectives



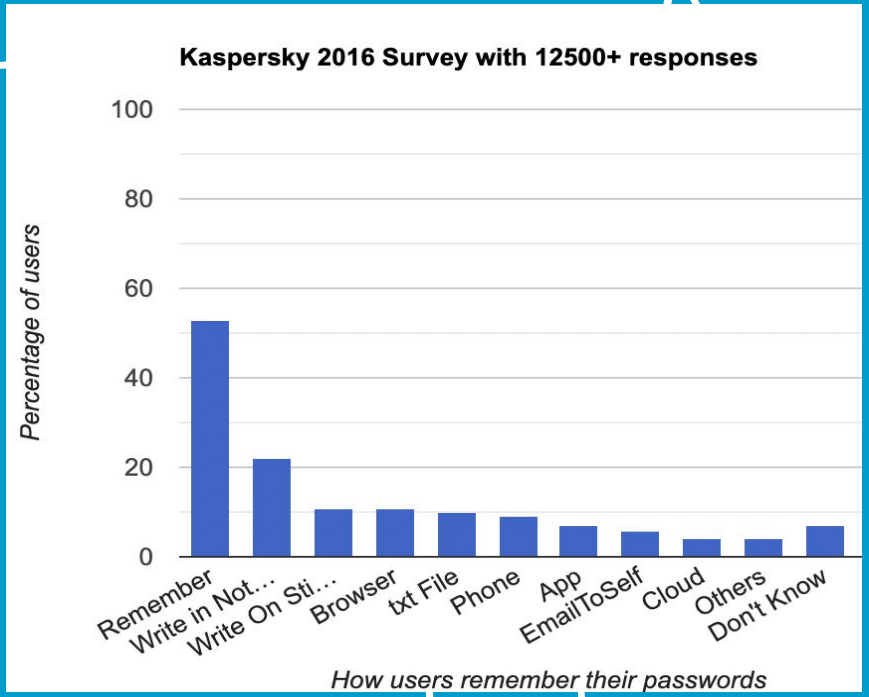
How is the product going help us?

Why Password manager!

The aim is to make a GUI based python program to have easy access to your data. You just need:

- To remember your master password
- Not use that password anywhere else.

All your details will be stored on your device in an encrypted CVS file.



Kaspersky Survey

Important takeaways from the survey:

1) More than 50% of users use unsafe methods of saving their passwords
2) Less than 10% actually use a dedicated password manager app.

Technologies Used

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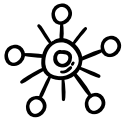
IDE
(VS Code)

Provides comprehensive environment for development



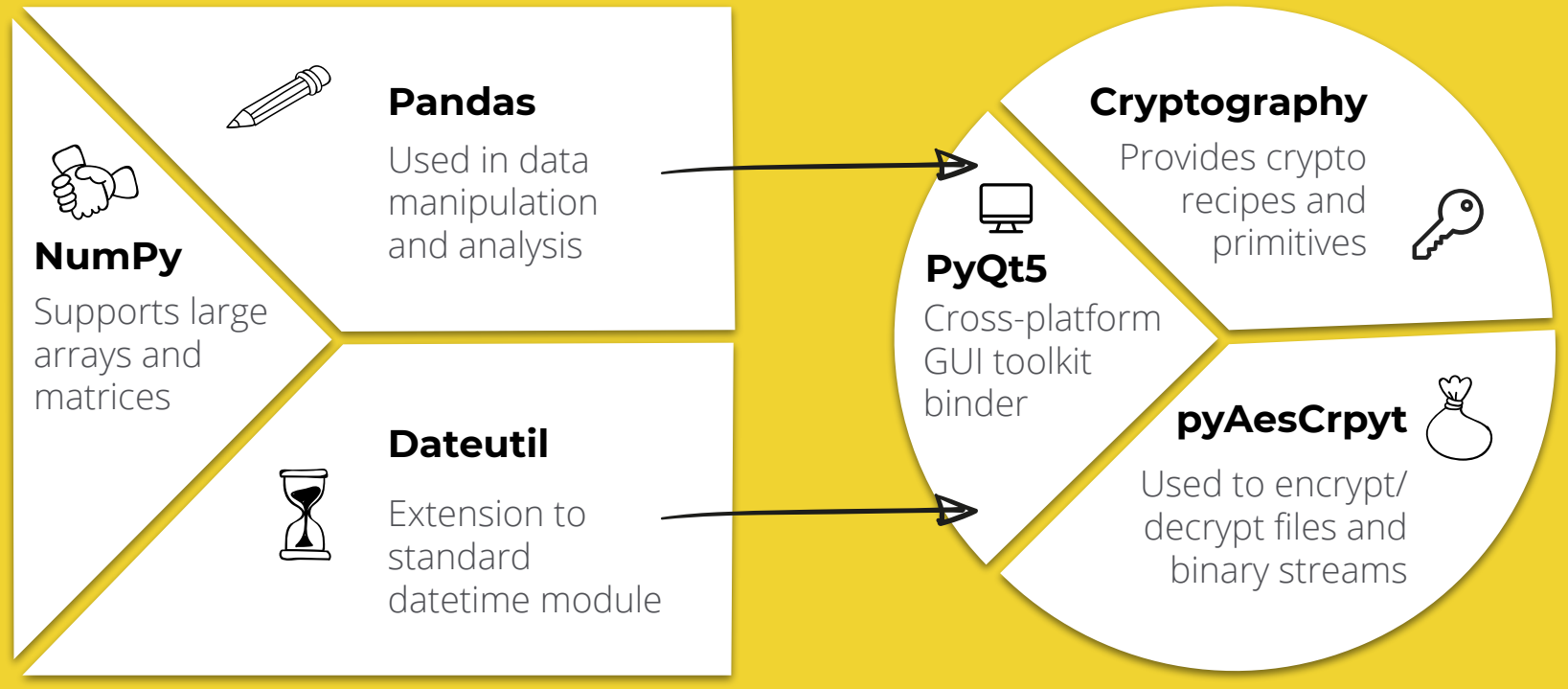
Python 3.7

General purpose, high level, interpreted language

Encryption (AES 256)
Hashing (SHA512)

Encoding information, mapping arbitrary data

Python Libraries Required



Architecture

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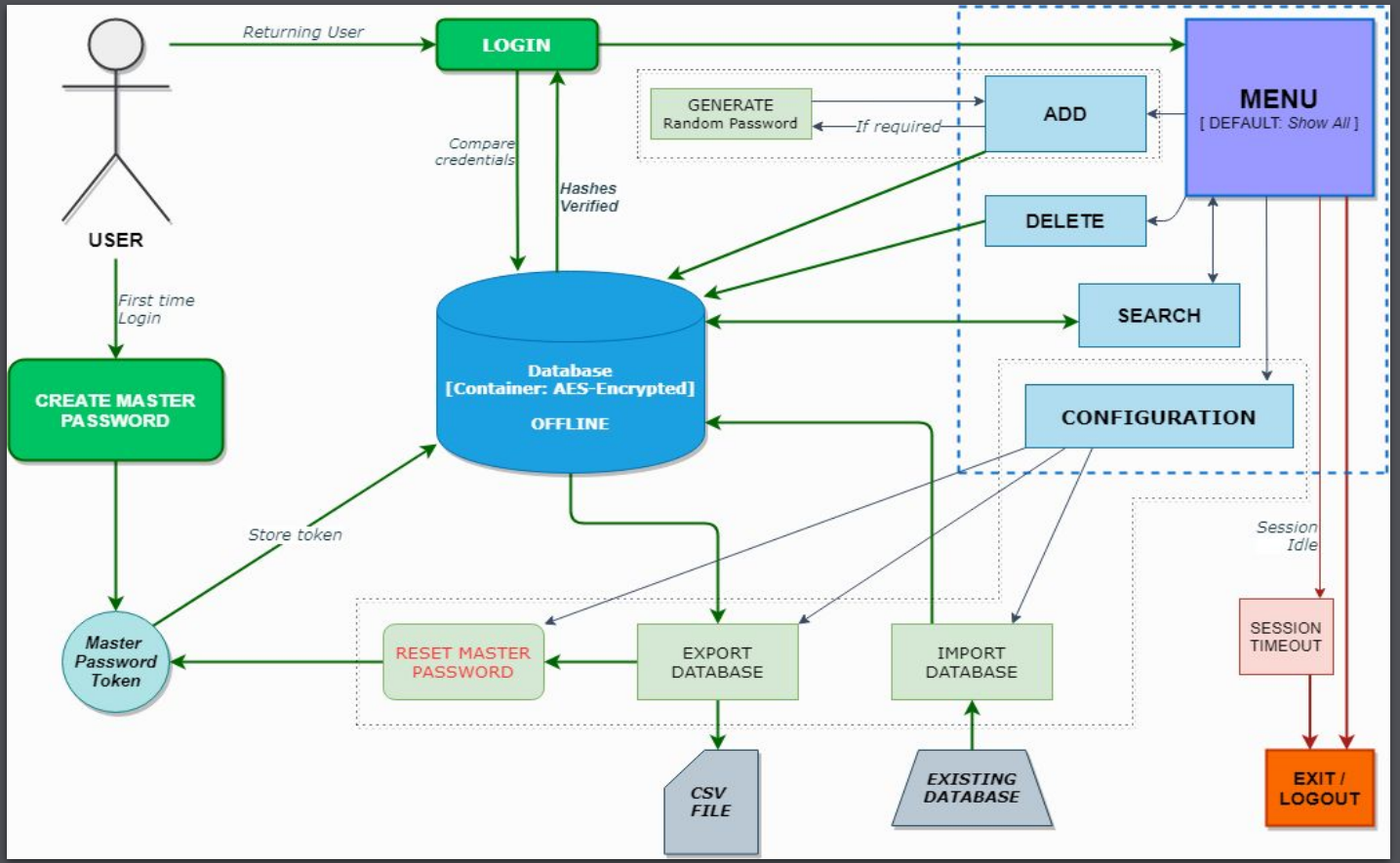
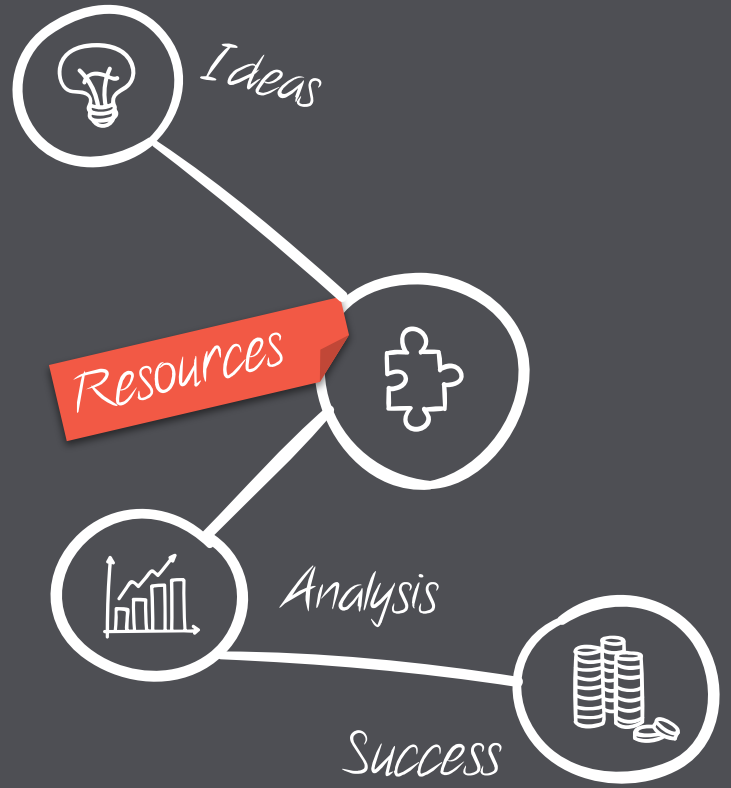


05

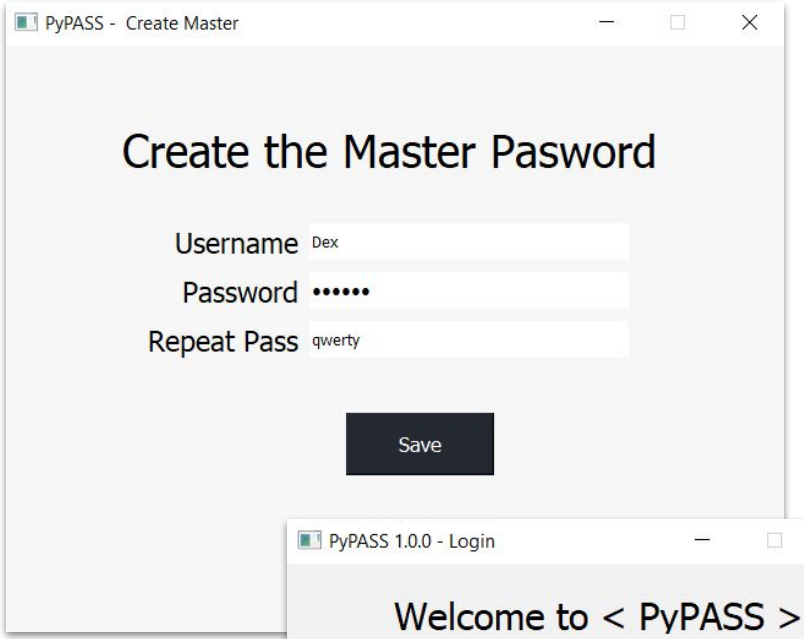
Sneak Peek

A quick look at the key features of our application.



Initial Login

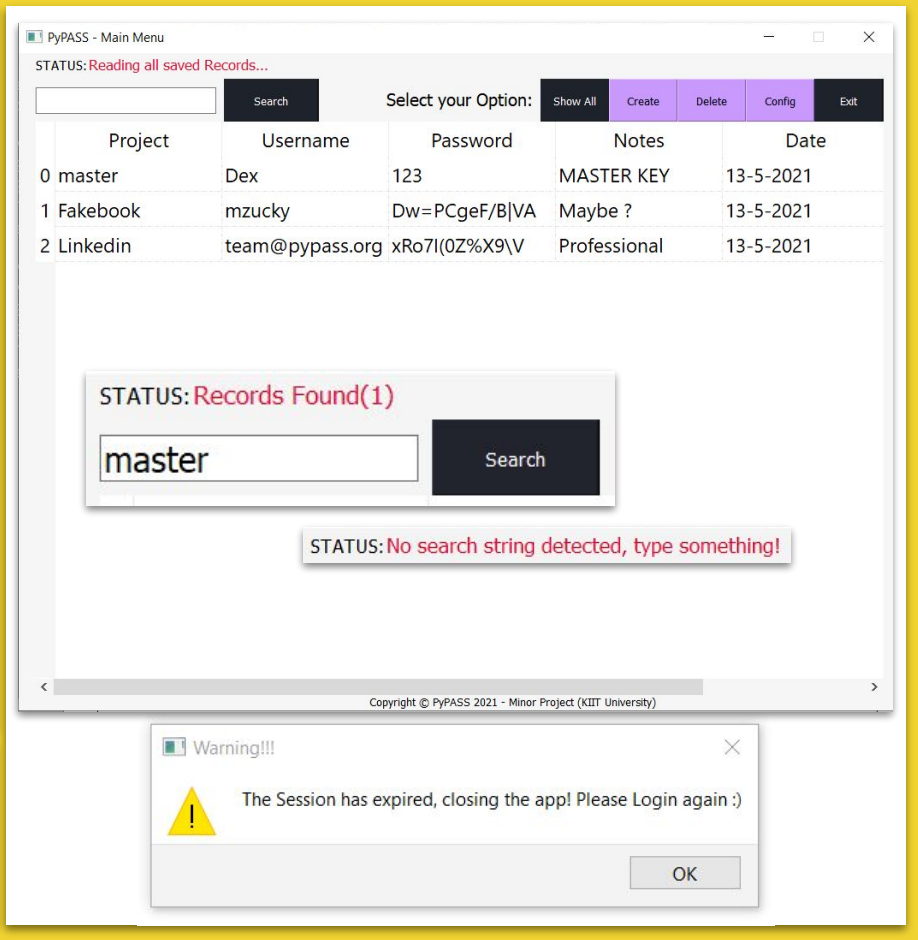
Master password: The one password that will be used to access your details.
Login: Create Username and password that will be used to access the data



Main Menu

+ Session Time Limit

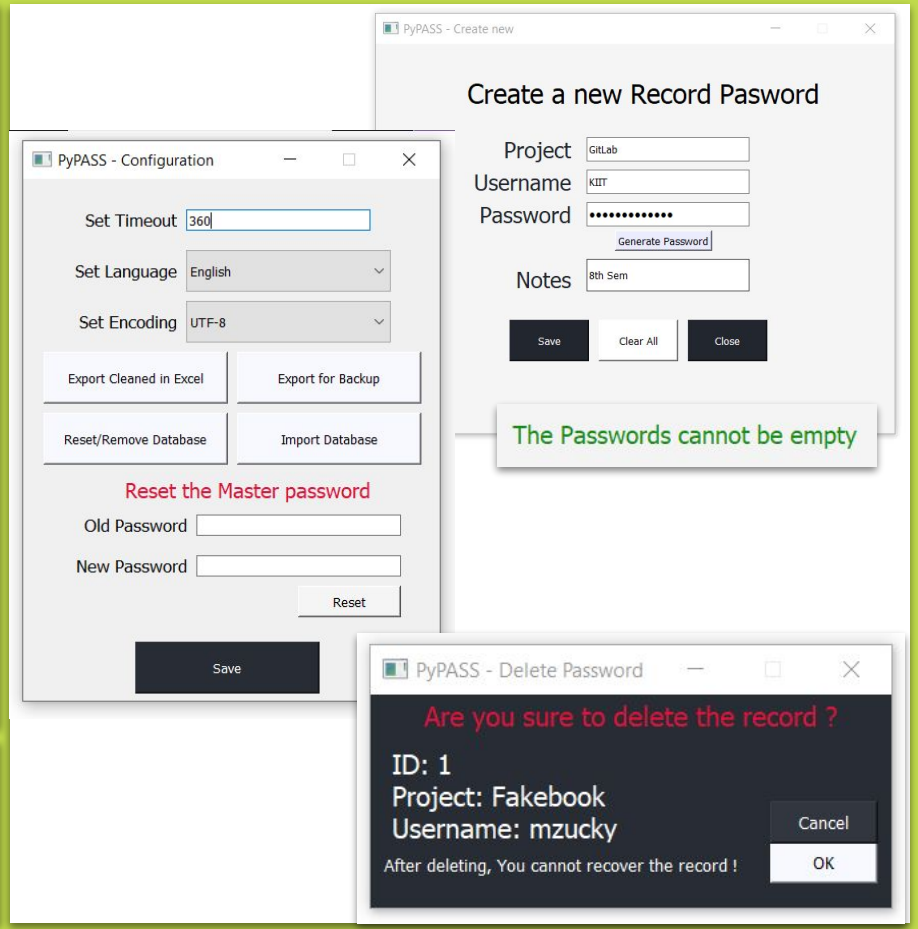
Search: Look through the database for a specific keyword
Show All: Displays all the stored entries from the dataframe
Session Timeout: Logs out the user and exits the application after a preset time of inactivity in the app window



Further Options

(Add/Delete Password + Config)

Add entry: Add an entry to the database.
Delete entry: Delete the entry from the database
Generate password: Generates a random string of pre-specified length(12)
Reset master: Reset your master password and change it
Export CSV: Saves your data in a spreadsheet format.
Import Database: Reads data from a spreadsheet file and save the data in encrypted form.



Future Updates

Upgrading app security, adding features such as **2FA Authentication**, **Backup** and **Recovery**.

Converting this into a **cloud application** for easy access, compatible across all platforms (Windows, MacOS, Linux)

Our Team

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Thanks!

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