

Software Lab (EEP702)

Assignment 7

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Contents

1	Abstract:	3
2	Problem Statement:	4
3	Introduction:	5
3.1	PYTHON:	5
3.2	TKinter:	5
4	Specification And Assumptions	6
5	Methodology:	7
5.1	Logic Implementation	7
5.2	Execution Directive	7
6	Flowchart:	8
7	Screenshots:	9
8	Result:	11
9	Conclusion:	11

1 Abstract:

Python is a widely used general-purpose, high-level programming language. Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than would be possible in languages such as C++ or Java. The language provides constructs intended to enable clear programs on both a small and large scale. Python supports multiple programming paradigms, including object-oriented, imperative and functional programming or procedural styles. It features a dynamic type system and automatic memory management and has a large and comprehensive standard library

Tkinter is a Python binding to the Tk GUI toolkit. It is the standard Python interface to the Tk GUI toolkit and is Python's de facto standard GUI, and is included with the standard Windows and Mac OS X install of Python. The name Tkinter comes from Tk interface. Tkinter was written by Fredrik Lundh. As with most other modern Tk bindings, Tkinter is implemented as a Python wrapper around a complete Tcl interpreter embedded in the Python interpreter. Tkinter calls are translated into Tcl commands which are fed to this embedded interpreter, thus making it possible to mix Python and Tcl in a single application.

2 Problem Statement:

Design a simple user friendly Sticky notes with optional reminder:

1. The App should keep track of all the notes(todo list and events to attend) with date and time that is entered by the user.
2. The App should have a option to assign priorities to notes(todo list) up to three and all the notes based on the priority has to be sorted for a particular day and displayed one below the other, so that the user can prioritize the tasks that has to be accomplished for any given day. Similarly the notes for the next day has to displayed below and so on.
3. If the note is an event to attend, then an option should be present to either place a reminder or not and an alarm should remind the user before a mentioned time which is given by the user while adding the note.
4. Of course, there should be an option for the user to remove the notes. Select many notes option should be implemented so that many notes can be deleted at one go.
5. App can use the system time.
6. There should be select many notes option to select any notes and mail to a friend.
7. The App should be password protected.

3 Introduction:

3.1 PYTHON:

- Python is a widely used general-purpose, high-level programming language. Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than would be possible in languages such as C++ or Java. The language provides constructs intended to enable clear programs on both a small and large scale.
- Methods on objects are functions attached to the object's class; the syntax `instance.method(argument)` is, for normal methods and functions, syntactic sugar for `Class.method(instance, argument)`. Python methods have an explicit `self` parameter to access instance data, in contrast to the implicit `self` (or `this`) in some other object-oriented programming languages (e.g. C++, Java, Objective-C, or Ruby).
- Python uses duck typing and has typed objects but untyped variable names. Type constraints are not checked at compile time; rather, operations on an object may fail, signifying that the given object is not of a suitable type. Despite being dynamically typed, Python is strongly typed, forbidding operations that are not well-defined (for example, adding a number to a string) rather than silently attempting to make sense of them.
- Python has a large standard library, commonly cited as one of Python's greatest strengths,[64] providing tools suited to many tasks. This is deliberate and has been described as a "batteries included". Python philosophy. For Internet-facing applications, a large number of standard formats and protocols (such as MIME and HTTP) are supported. Modules for creating graphical user interfaces, connecting to relational databases, pseudorandom number generators, arithmetic with arbitrary precision decimals, manipulating regular expressions, and doing unit testing are also included.

3.2 TKinter:

- Tkinter is a Python binding to the Tk GUI toolkit. It is the standard Python interface to the Tk GUI toolkit and is Python's de facto standard GUI, and is included with the standard Windows and Mac OS X install of Python.

The name Tkinter comes from Tk interface. Tkinter was written by Fredrik Lundh.

As with most other modern Tk bindings, Tkinter is implemented as a Python wrapper around a complete Tcl interpreter embedded in the Python interpreter. Tkinter calls are translated into Tcl commands which are fed to this embedded interpreter, thus making it possible to mix Python and Tcl in a single application.

- Python 2.7 and Python 3.1 incorporate the "themed Tk" ("ttk") functionality of Tk 8.5. This allows Tk widgets to be easily themed to look like the native desktop environment in which the application is running, thereby addressing a long-standing criticism of Tk (and hence of Tkinter).

There are several popular GUI library alternatives available, such as wxPython, PyQt (PySide), Pygame and PyGTK.

Tkinter is free software released under a Python license.

4 Specification And Assumptions

Tool Specifications:

Language used: Python

Platform: Ubuntu 14.04

Additional tools used: Tkinter

DoxyGen: This was used to generate the code documentation

5 Methodology:

5.1 Logic Implementation

Complete code is written in python. Different function is defined for each process. Flowchart will better describe the how to logic is implemented. Help is also there . It is similar to gedit with some more functionalities as written in assignment problem. Screenshot are also provided for better understanding .

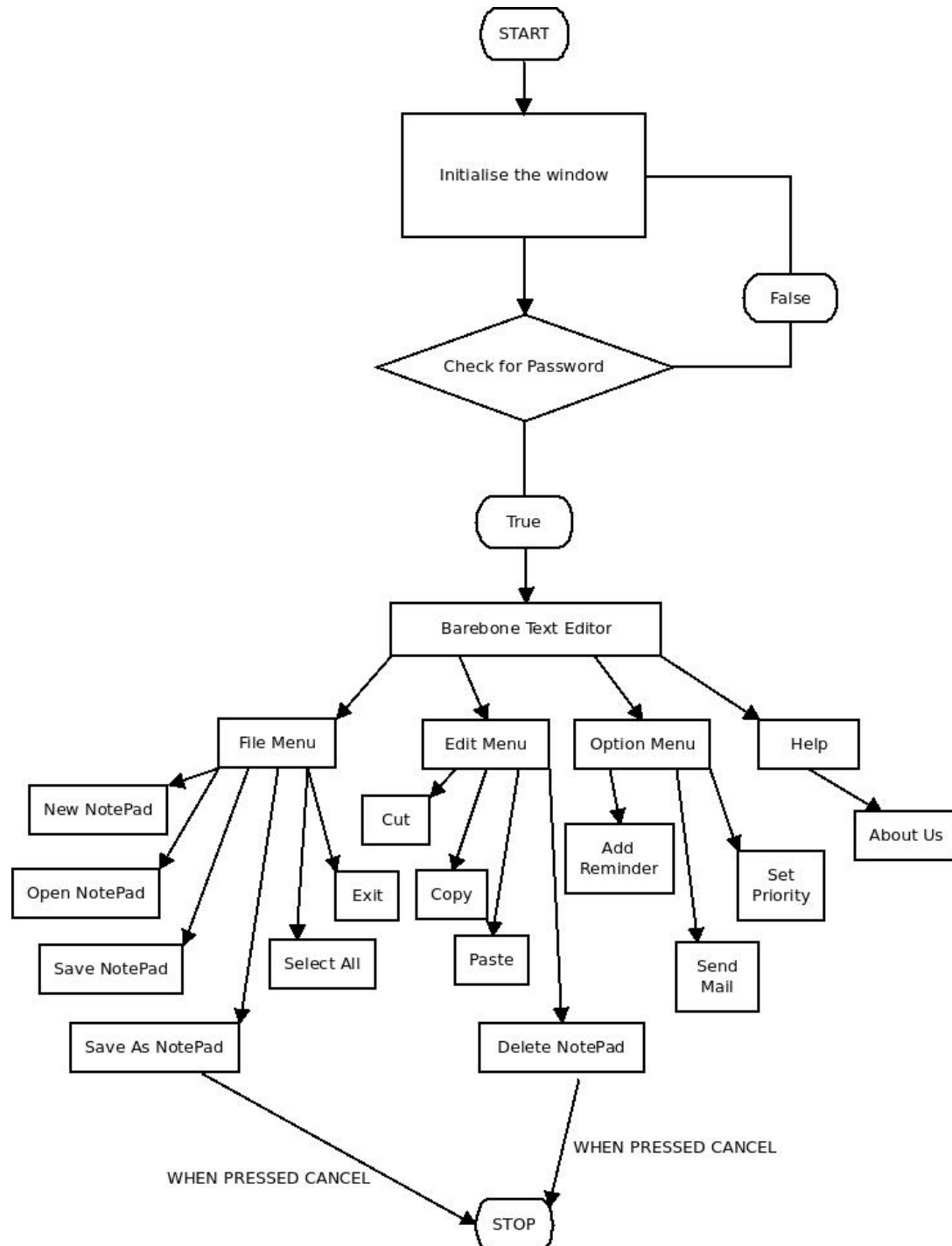
5.2 Execution Directive

No compilation required

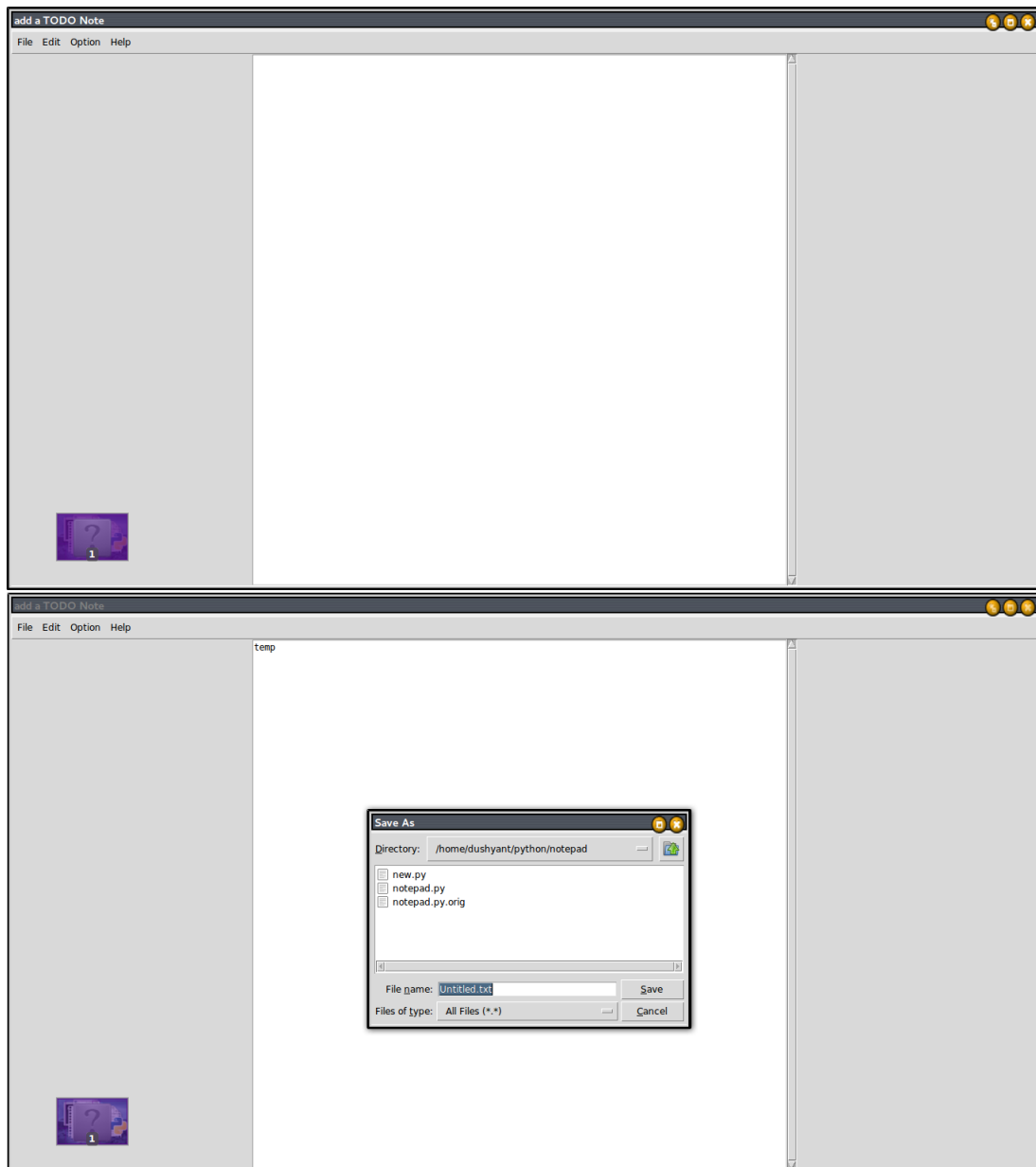
Directly run by typing

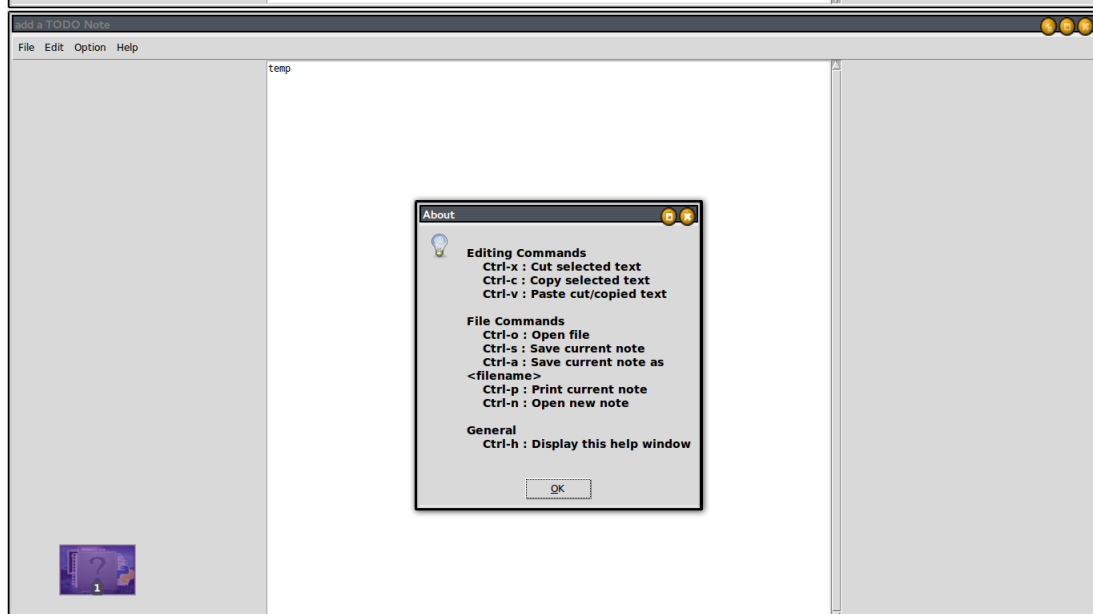
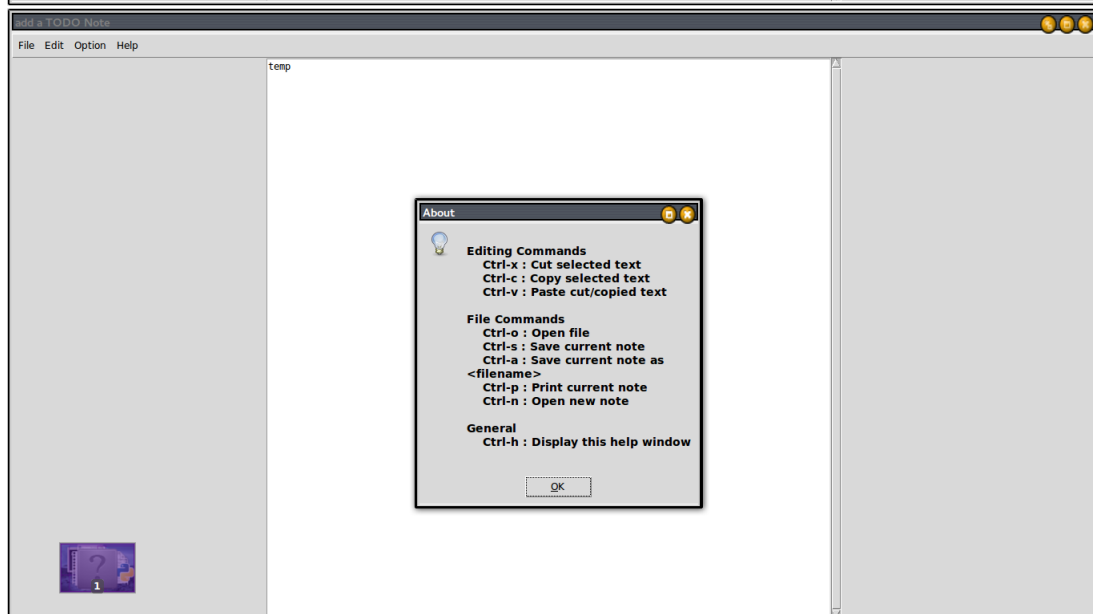
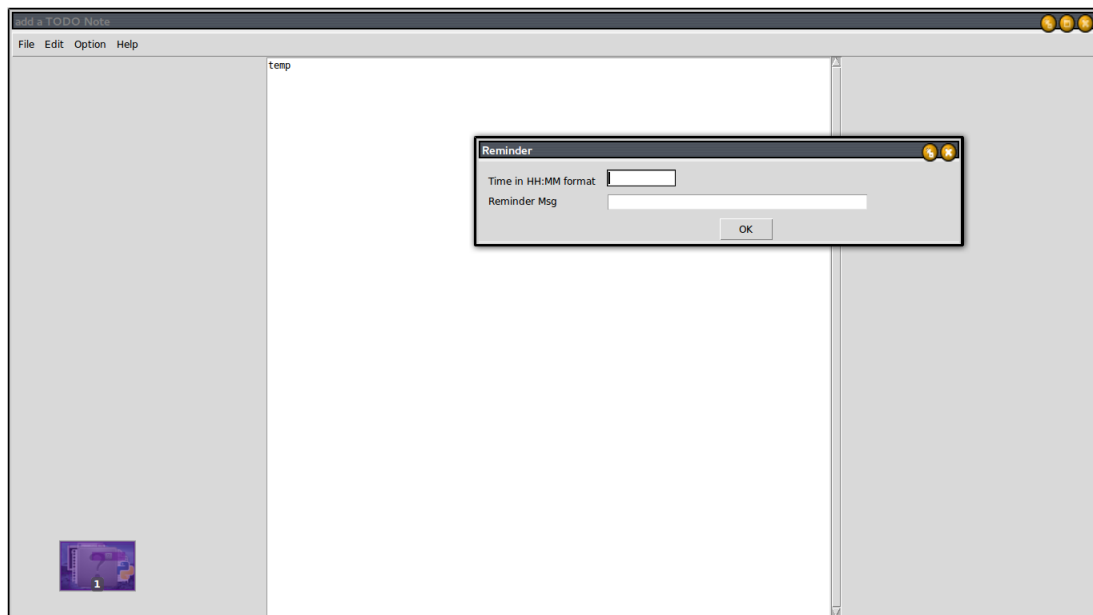
`python Notepad.py`

6 Flowchart:



7 Screenshots:





8 Result:

A notepad application is developed using the following:

Python

TKinter

Problems encountered: Testing internet connectivity

Solution: Still not been able to send mail using proxy settings

9 Conclusion:

Successfully developed a code that generates notepad the given functionality.