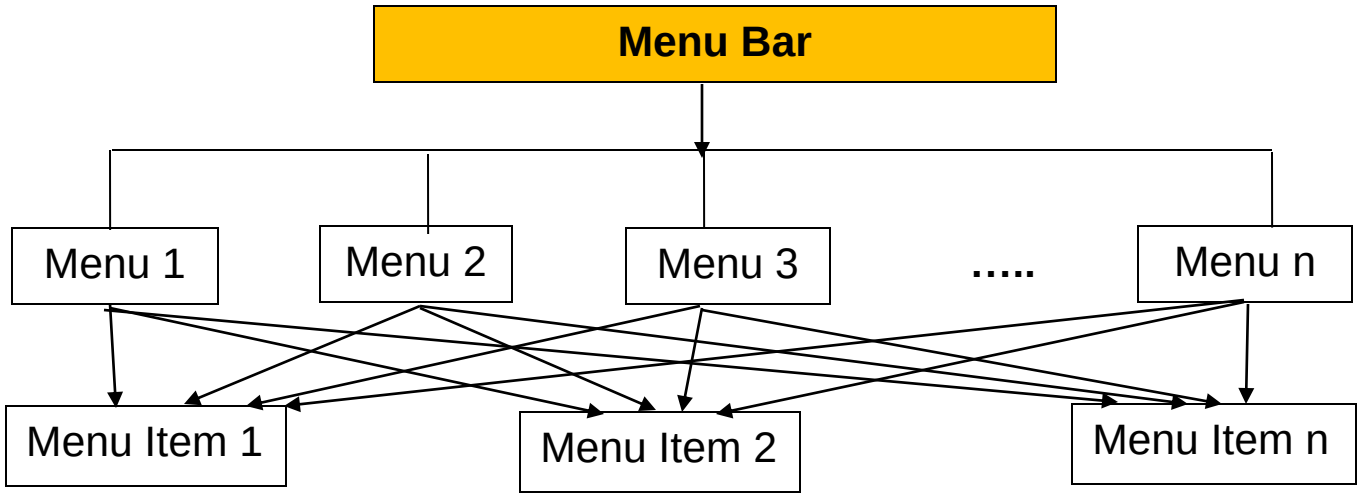
WXPYTHON GUI - MENU

WXPYTHON MENU

- In wxpython, menu application is created with help of **Menu Bar** and **Menu** classes



ELEMENTS OF MENU APPLICATION

- In order to create a menu application, three elements are mainly needed. They are
  1. Menu Bar
  2. Menu
  3. Menu Item

Where,

- Menu bar is a container for menus
- Menu is a collection of menu items
- Menu Item represents the element of the menu.

1. MenuBar

- It is responsible for creating menu application
- This is created by using the class **wx.MenuBar**

Syntax

```
rm=wx.MenuBar()
```

2. Menu

- It is used for creating menu or menus
- This is created by using the class **wx.Menu**

Syntax

```
rm=wx.Menu()
```

3. Menu Item

- It is used for creating menu items for a particular menu
- This can be created either by adding **Append()** method of menu class or **wx.MenuItem** class

IMPORTANT METHODS OF MENUBAR CLASS

1. Append(menu, “title”)

- It is an instance method of menu bar class
- This method is used to **add menu / item to end of the menu bar**
- It takes two arguments, where
  - 1st argument is the name of the menu
  - 2nd argument is the title of the menu
- Return type: Any

IMPORTANT METHODS OF MENU CLASS

1. Append(id, “title”, “Description”)

- It is an instance method of Menu class
- It is used to **add a menu item to menu**
- It takes three arguments, where
  - 1st argument is id of the menu item
  - 2nd argument is the title of the menu item
  - 3rd argument is the description of the menu item
- Return type: Any

INSTANCE METHODS OF FRAME

1. setMenuBar(menubar)

- It is an instance method of frame class
- This method is used to **tell the frame to display the given menu bar**
- It takes only one argument which is the object of the menu bar class
- Return type: Any

EVENT HANDLER FOR MENU

- It is possible to add event handler for each menu item of menu class
- This is done by the special method called Bind()

Syntax

```
menu.Bind(EVT_MENU, Event Handler, object-menuitem)
```

Where,

- **menu** is an object of the menu class
- **EVT_MENU** is a type of event which is menu item click event
- **Event Handler** is a user defined event handler method
- **object** is the object of the target menu item.

Example

```
fm.Bind(EVT_MENU, disp, m1)
```

Where,

- Fm is an object of menu
- Disp is a user defined event handler
- m1 is an object of the target menu item.

STEPS FOR CREATING MENU APPLICATION

1. Create a root object or menubar object using **wx.MenuBar** class
2. Create a menu using **wx.Menu** class
3. Add a Menu Item using **Append()** or **wx.MenuItem** class
4. Attach menubar to root window using **setMenuBar()** method
5. Show the main window by calling the MainLoop() method.

I. EXAMPLE OF CREATING A MENU APPLICATION

Language	:	Python 3
Editor	:	VSC Editor
OS	:	Windows 10
GUI Framework	:	wxPython

SOURCE CODE

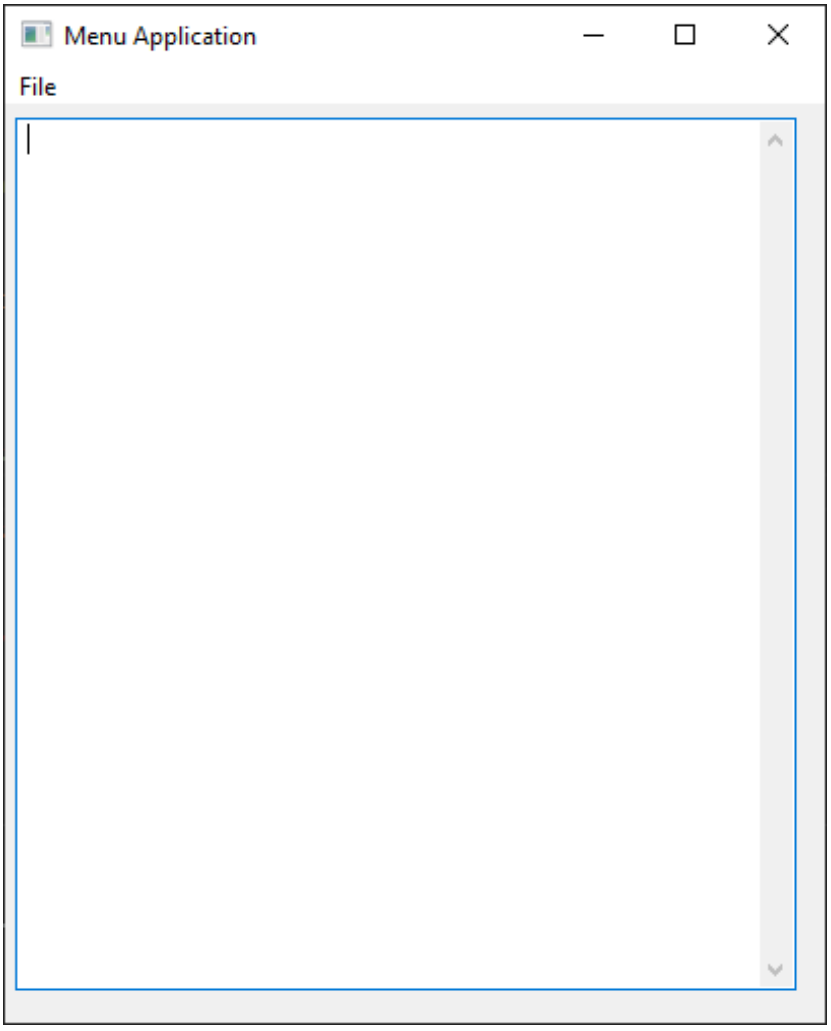
```
# import the wx module
import wx
# create an object for the application class
obj=wx.App()
# create a root window
rt=wx.Frame(None, title="Menu Application", size=(420,510))
# create a panel object
pl=wx.Panel(rt)
# add a multiline text box
tb=wx.TextCtrl(pl, size=(385,430), pos=(5,5), style=wx.TE_MULTILINE)
# EVENT HANDLER 2 FOR MENU ITEM 2
def info(evt):
    wx.MessageBox("WxPython-Menu","Message")
# EVENT HANDLER 2 FOR MENU ITEM 1
def openFile(evt):
# create file dialog
    fd=wx.FileDialog(pl, "Open a File")
# display the dialog
    if(fd.ShowModal()==wx.ID_OK):
        path=fd.GetPath()
```

```
# use python file function open()
        fp=open(path)
# read all the data using read()
        ct=fp.read()
# set the file contents to text box
        tb.SetValue(ct)
# EVENT HANDLER 2 FOR MENU ITEM 3
def help(ev):
    tb.SetValue("Work is under Progress")
# EVENT HANDLER 2 FOR MENU ITEM 4
def exitApp(evt):
    wx.Exit()
# create a Menu Bar object
mb=wx.MenuBar()
# create a file menu
file=wx.Menu()
# add menu items for file menu
sm1=file.Append(1,"Open File","Open an existing file")
sm2=file.Append(2,"About Me","Information about author")
sm3=file.Append(3,"Help","Information about Help")
sm4=file.Append(4,"Exit","Exit from App")
# add file menu to menubar
mb.Append(file,"File")
# add menu bar to root window
rt.SetMenuBar(mb)
file.Bind(wx.EVT_MENU, openFile, sm1)
file.Bind(wx.EVT_MENU, info, sm2)
file.Bind(wx.EVT_MENU, help, sm3)
file.Bind(wx.EVT_MENU, exitApp, sm4)
```

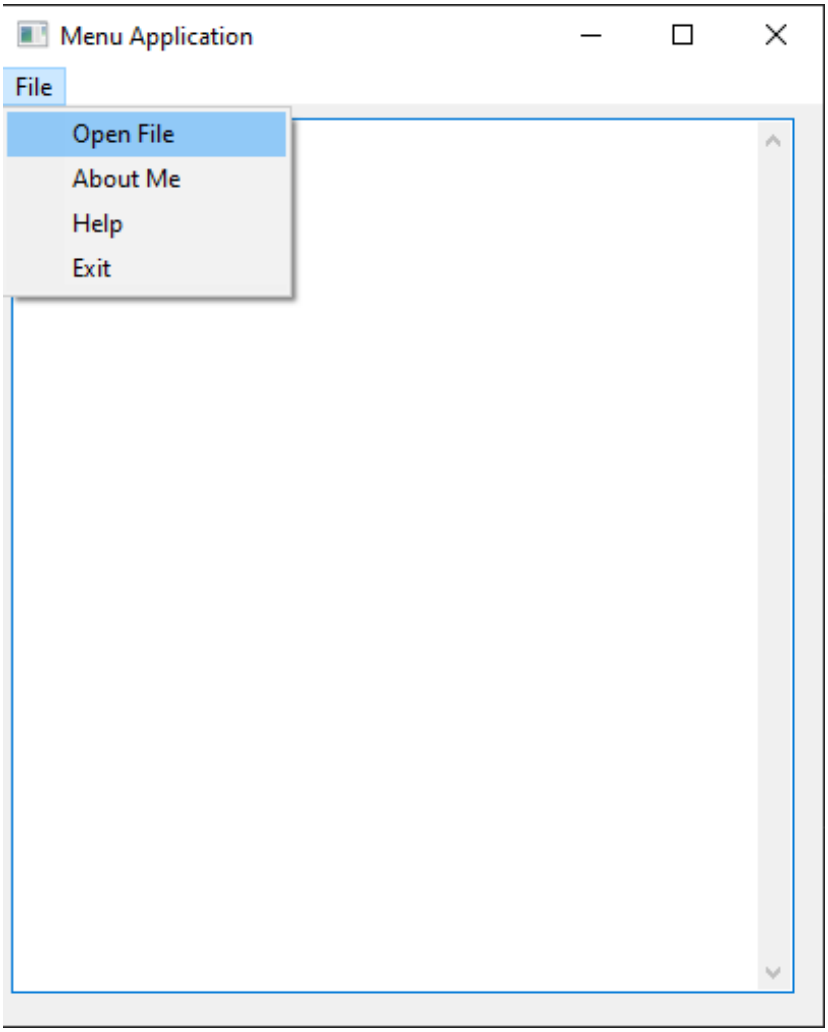
```
# display the root window
rt.Show()
# run the application until from application
obj.MainLoop()
```

OUTPUT

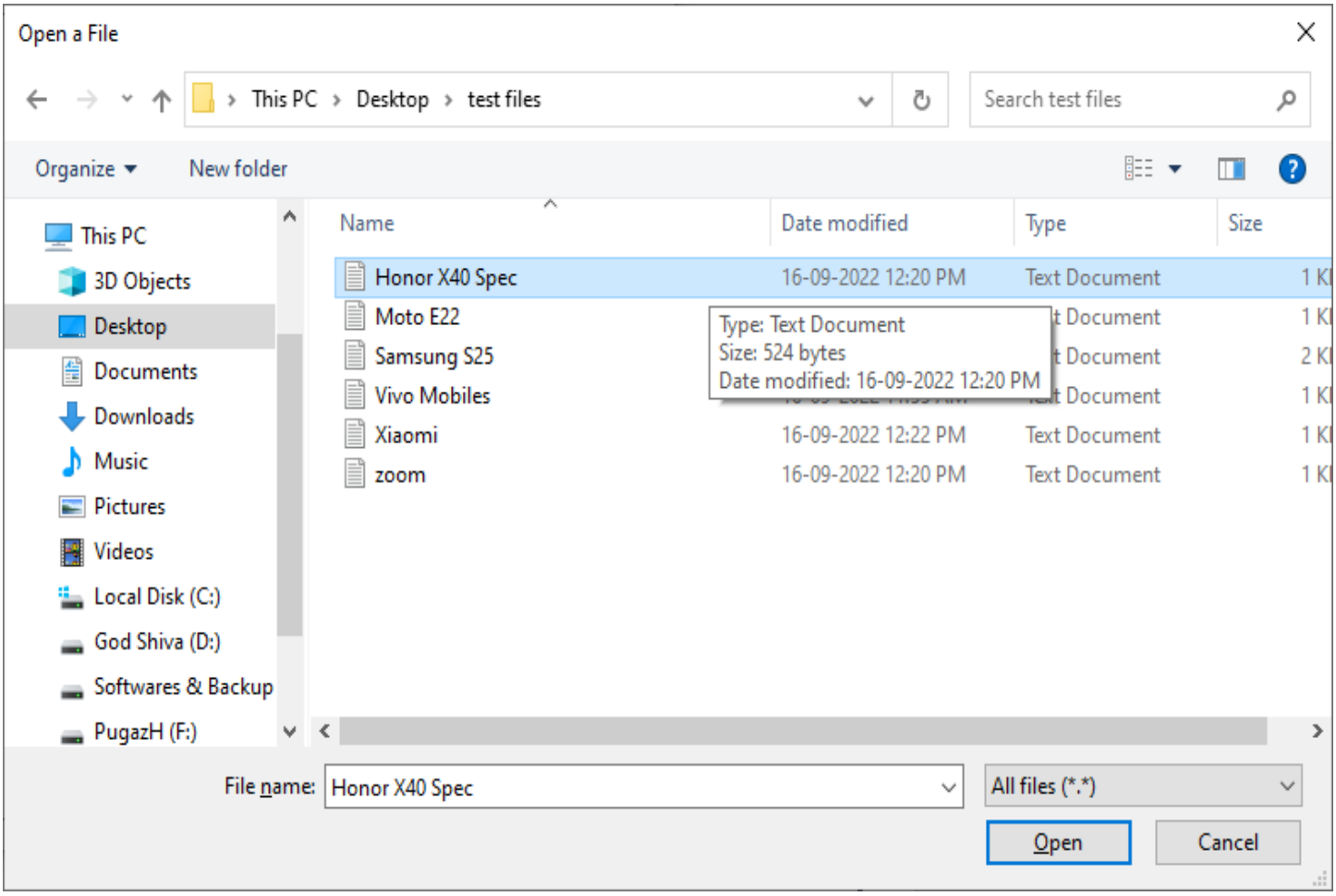
2.1 HOME PAGE



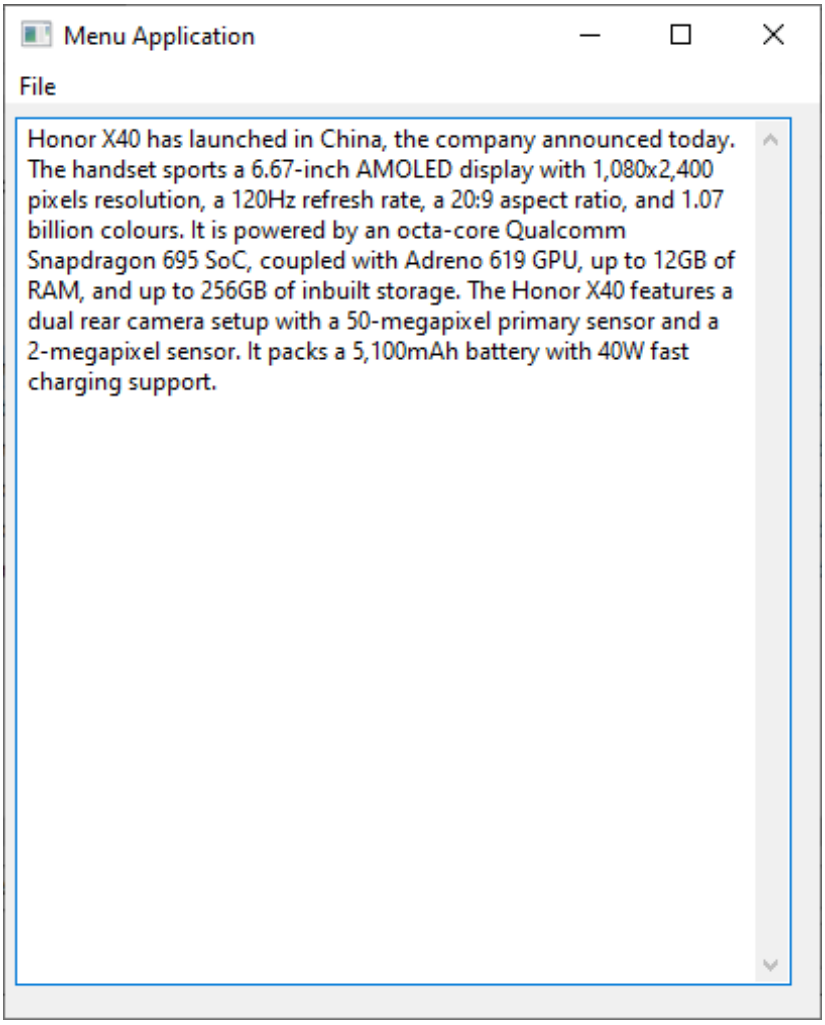
2.2 SELECTION OF FIRST MENU



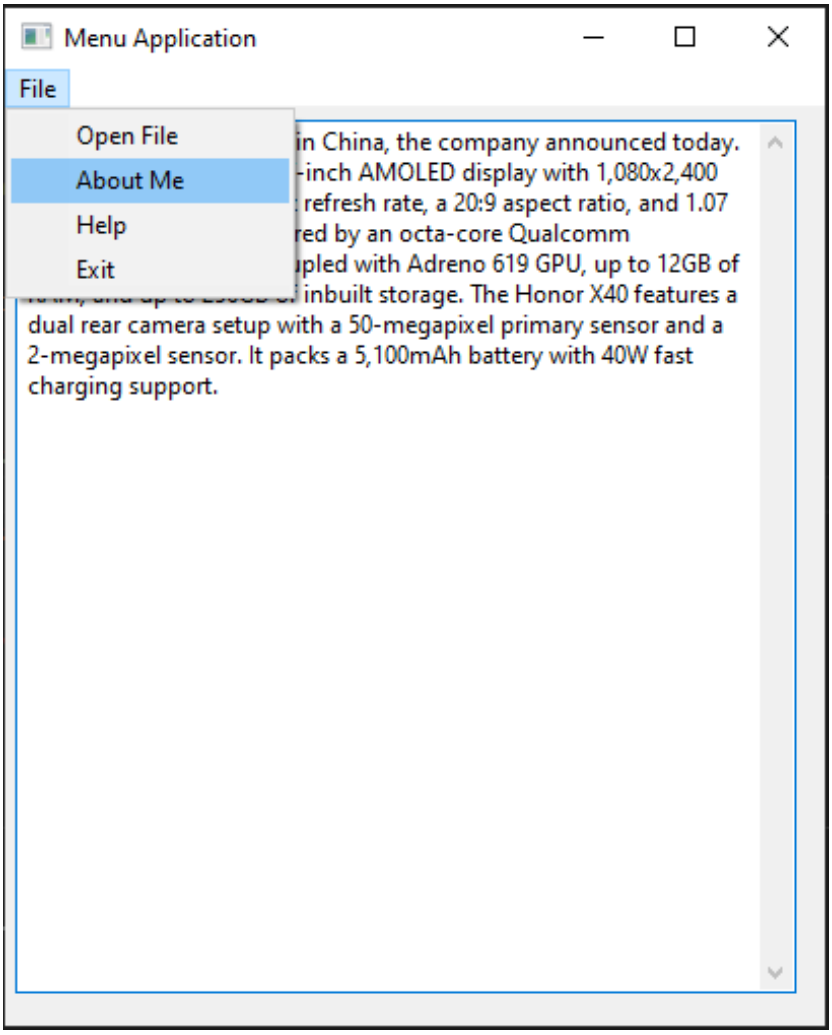
2.2.1 SELECTING INPUT FILE VIA FILEDIALOG



2.2.2 DISPLAYING FILE CONTENTS IN MULTILINE TEXT BOX



2.3 SELECTION OF SECOND MENU



2.3.1 RESPONSE OF MENU ITEM ABOUT ME