1. Launch Qt Designer and create a Main Window template-based application

2. We can always remove the default menu bar by right-clicking in the main window and selecting the Remove Menu Bar option from the context menu that pops up.

3. You can also add a menu bar later by selecting the Create Menu Bar option from the context menu

4. Click the placeholder to highlight it and type to modify its text. When you add a menu item, Type Here appears below the new menu item

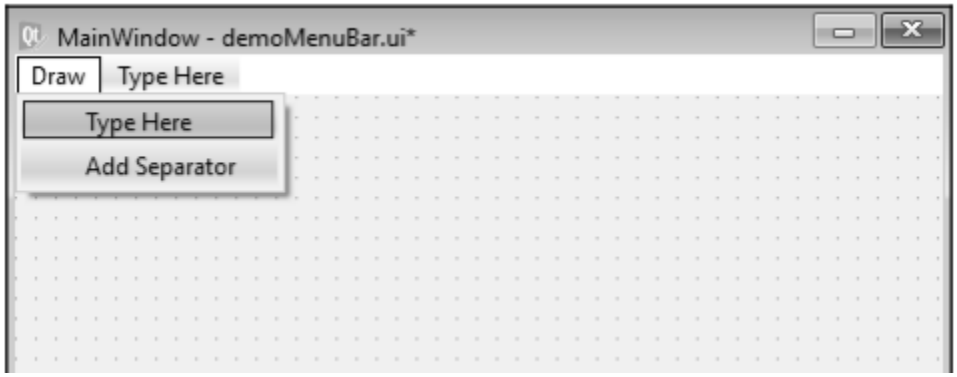
5. Again, just single left-click the Type Here placeholder to select it and simply type the text for the next menu item

6. You can delete any menu entry by right-clicking it and, from the context menu that pops up, select the option Remove Action action_name
(While writing menu or menu item text, if you add an ampersand character (&) before any character, that character in the menu will appear as underlined and will be treated as a shortcut key. We will also learn how to assign a shortcut key to a menu item later)

7. When you create a new menu item by replacing the Type Here placeholders, that menu item will appear as an individual action in the Action Editor box, from where you can configure its properties.

(Recall that we want to create two menus in this menu bar with text, Draw and Edit. The Draw menu will have three menu items, Draw Circle, Draw Rectangle, and Draw Line. After these three menu items, a separator will be inserted followed by a fourth menu item called Properties. The Properties menu item will have two submenu items, Page Setup and Set Password. The Edit menu will contain three menu items, Cut, Copy, and Paste)

8. Double-click the Type Here placeholder and enter the text for the first menu, Draw. The down arrow key on the Draw menu brings up the Type Here and Add Separator options, as shown in the following screenshot:



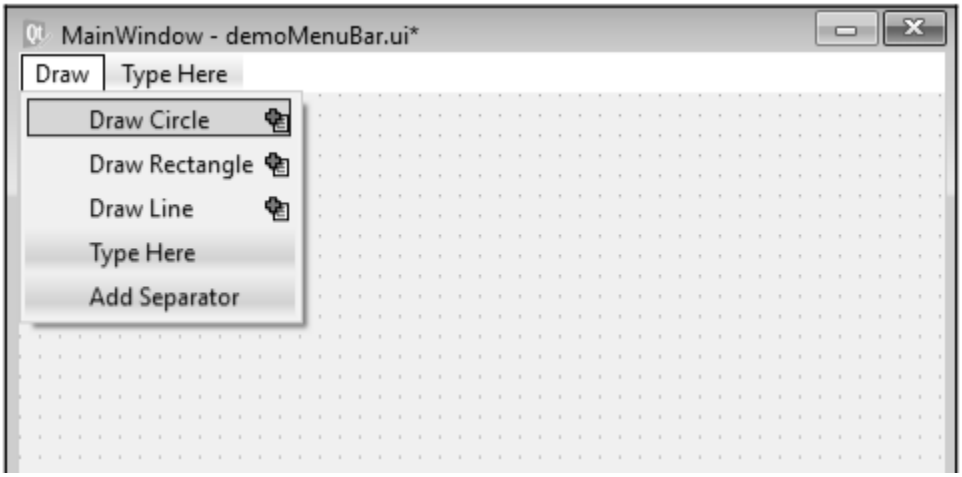
9. Double-click Type Here and type Draw Circle for the first menu item under the Draw menu. The down arrow key on the Draw Circle menu provides the Type Here and Add Separator options again.

10. Double-click Type Here and type Draw Rectangle for the menu item.

11. Press the down arrow key to get two options, Type Here and Add Separator

12. Double-click Type Here and type Draw Line for the third menu item

13. On pressing the down arrow key, again you get two options, Type Here and Add Separator, as shown in the following screenshot:



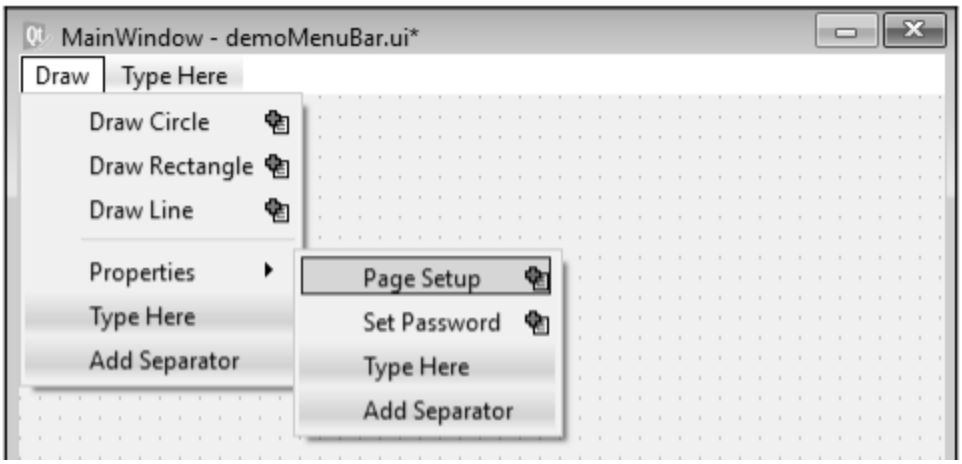
14. Select Add Separator to add a separator after the first three menu items.

15. Press the down arrow key after the separator and add a fourth menu item, Properties. This is done because we want two submenu items for the Properties menu item

16. Select the right arrow to add submenu items to the Properties menu

17. Press the right arrow key on any menu item to add a submenu item to it. In the submenu item, select Type Here and enter the first submenu, Page Setup

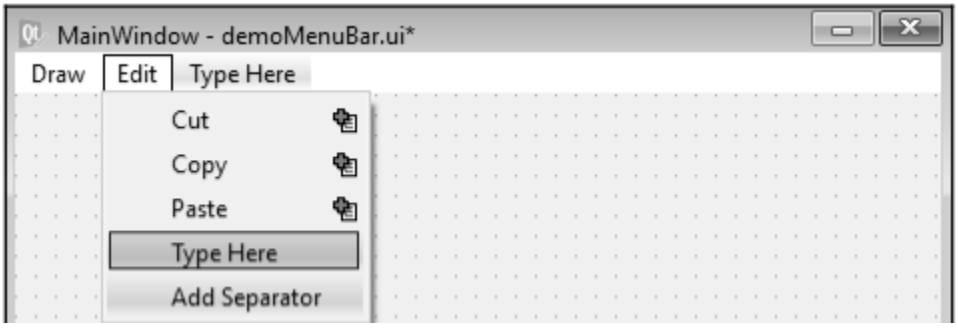
18. Select the down arrow and enter Set Password below the Page Setup submenu item, as shown in the following screenshot:



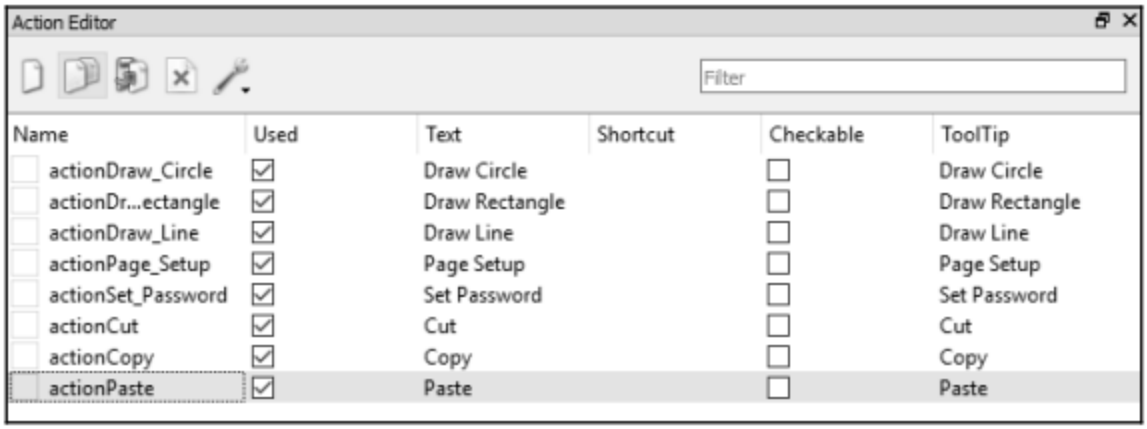
19. The first menu, Draw, is complete. Now, we need to add another menu, Edit. Select the Draw menu and press the right arrow key to indicate that you want to add a second menu to the menu bar

20. Replace Type Here with Edit

21. Press the down arrow and add three menu items, Cut, Copy, and Paste, as shown in the following screenshot:

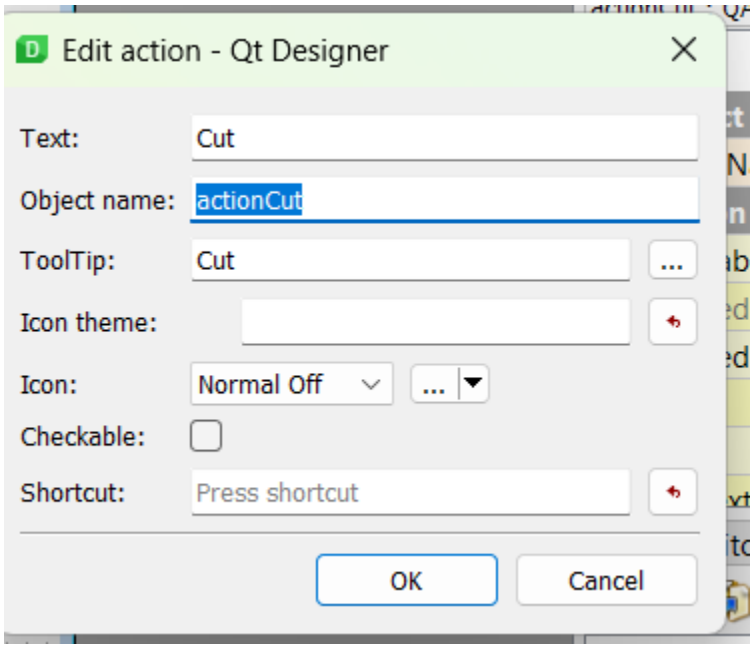


The actions for all menu items will appear in the Action Editor box automatically, as shown in the following screenshot:



You can see that the action names are generated by prefixing the text action to every menu text and replacing the spaces with underscores. These actions can be used to configure menu items.

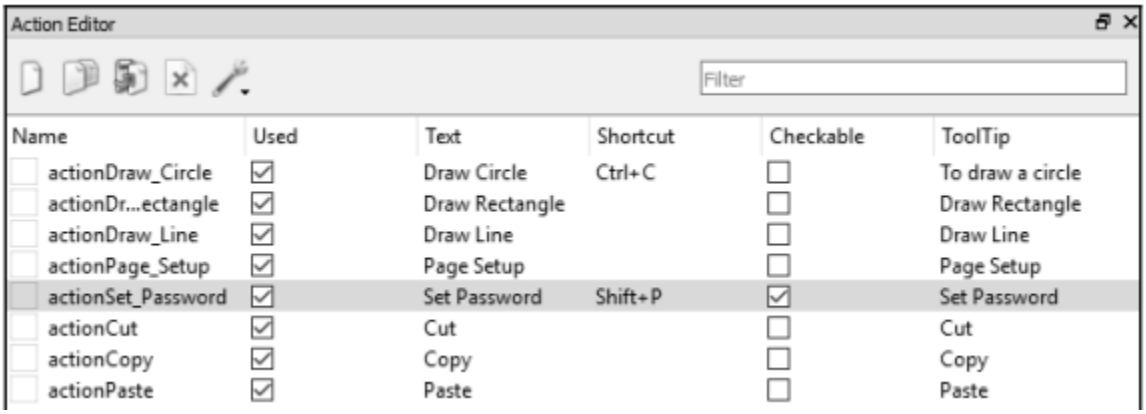
22. To add a tooltip message that appears when the user hovers over any menu item, you can use the ToolTip property. To get to the ToolTip property, in the action bar, double click on the action you want to edit. The pop up should look like this:



23. For short cuts, ShortCut, add the shortcut there. Press any 2 keys at the same time to add the shortcut. Eg

24. To assign a tooltip message to the Draw Circle menu item of the Draw menu, select actionDraw_Circle in the Action Editor box and set the ToolTip property to To draw a circle. Similarly, you can assign tooltip messages to all of the menu items.

25. You can also make any menu item checkable, that is, you can make it a toggle menu item. To do so, select the action of the desired menu item and check the Checkable checkbox. The actions of each menu item, along with its action name, menu text, shortcut keys, checkable status, and tooltip, appear in the Action Editor box. The following screenshot shows the action of the Set Password submenu item, which confirms that its shortcut key is Shift + P and it is checkable:



26. To display a message, drag and drop a Label widget onto the form.

27. Our menu bar is complete; save the application with the name demoMenuBar.ui.

28. We use the pyuic5 command line utility to convert the .ui (XML) file into a .py file.

29. Create a Python script with the name callMenuBar.pyw that imports the previous code, demoMenuBar.py, to invoke the menu and display the text message with a Label widget when a menu item is selected.
(CHECK IT OUT IN THE .PYW, it has all the other functions to make sure it works.)

Make sure you know this, firstly to not get confused, create the self.ui and the main first. Then start adding other functions. Eg of the self.ui structure:

```
import sys
from PyQt5.QtWidgets import QMainWindow, QApplication
from PyQt5.QtGui import QPainter
from demoMenuBar import Ui_MainWindow

class AppWindow(QMainWindow):
    def __init__(self):
        super().__init__()
        self.ui = Ui_MainWindow()
        self.ui.setupUi(self)

if __name__ == '__main__':
    app = QApplication(sys.argv)
    w = AppWindow()
    w.show()
    sys.exit(app.exec_())
```