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1  from PyQt5 import QtWidgets, QtCore
2  import sys
3
4  class SimpleDemo(QtWidgets.QWidget):
5      def __init__(self, parent=None):
6          super().__init__(parent)
7          self.setWindowTitle("Simple Controls Demo")
8          self.resize(600, 400)
9
10         layout = QtWidgets.QVBoxLayout(self)
11
12         self.button = QtWidgets.QPushButton("Click Me")
13         self.button.setObjectName("button")
14         self.checkbox = QtWidgets.QCheckBox("Enable feature")
15         self.checkbox.setObjectName("checkbox")
16         self.combo = QtWidgets.QComboBox()
17         self.combo.setObjectName("combo")
18         self.combo.addItem("Option 1", "Option 2", "Option 3")
19
20         radio_group = QtWidgets.QGroupBox("Choose mode")
21         radio_group.setObjectName("radio_group")
22         radio_layout = QtWidgets.QHBoxLayout(radio_group)
23         self.radio_a = QtWidgets.QRadioButton("Mode A")
24         self.radio_a.setObjectName("radio_a")
25         self.radio_b = QtWidgets.QRadioButton("Mode B")
26         self.radio_b.setObjectName("radio_b")
27         self.radio_a.setChecked(True)
28         radio_layout.addWidget(self.radio_a)
29         radio_layout.addWidget(self.radio_b)
30
31         self.text_box = QtWidgets.QLineEdit()
32         self.text_box.setObjectName("text_box")
33         self.text_box.setText("")
34         self.text_box.setPlaceholderText("Enter text here")
35
36         self.status_label = QtWidgets.QLabel("Status: ready")
37         self.status_label.setObjectName("status_label")
38
39         layout.addWidget(self.button)
40         layout.addWidget(self.checkbox)
41         layout.addWidget(self.combo)
42         layout.addWidget(radio_group)
43         layout.addWidget(self.text_box)
44         layout.addWidget(self.status_label)
45
46         self.button.clicked.connect(self.on_button_clicked)
47         self.checkbox.stateChanged.connect(self.on_checkbox_changed)
48         self.combo.currentTextChanged.connect(self.on_combo_changed)
49         self.radio_a.toggled.connect(self.on_radio_changed)
50         self.radio_b.toggled.connect(self.on_radio_changed)
51         self.text_box.textChanged.connect(self.on_text_changed)
52
53     def on_button_clicked(self):
54         self.status_label.setText("Status: Button clicked")
55
56     def on_checkbox_changed(self, state):
57         enabled = state == QtCore.Qt.Checked
58         self.status_label.setText(f"Status: Checkbox {'on' if enabled else 'off'}")
59
60     def on_combo_changed(self, text):
61         self.status_label.setText(f"Status: Selected {text}")
62
63     def on_radio_changed(self):
64         if self.radio_a.isChecked():
65             mode = "Mode A"
66         elif self.radio_b.isChecked():
67             mode = "Mode B"
68         else:
69             mode = "Unknown"

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70         self.status_label.setText(f"Status: {mode} selected")
71
72     def on_text_changed(self, text):
73         self.status_label.setText(f"Status: Text box contains '{text}'")
74
75 if __name__ == "__main__":
76     app = QtWidgets.QApplication(sys.argv)
77     window = SimpleDemo()
78     window.show()
79     sys.exit(app.exec_())
80
81
```