



FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGIES

FALL 2023

FINAL EXAMINATION

COURSE TITLE:	PROGRAMMING IN PYTHON
COURSE CODE:	ICT 2130
INSTRUCTOR:	Mr. Bilenne Ndifor
DATE:	05/02/2023
DURATION:	2 weeks

Exercise 1: Web Browser

We wish to build a desktop GUI application (PyQt or PySide) that will allow individuals to browse the internet.

The objective of this Python project is to create a GUI based Web Browser. To build this, you **must have intermediate understanding of the PyQt5 library, and its modules**, for example the WebEngineWidgets module that you will need to install separately.

To build this Python Web Browser project, you may need the following libraries:

1. **PyQt5** – To create the GUI.
2. **sys.argv** – To get the inputs entered from the command line
3. **PyQt5.QtCore.QUrl** – The QUrl class will be used to convert string objects to a Qt acceptable URL object that will navigate through all the websites.
4. **PyQt5.QtWidgets** – To get the Widgets, including but not limited to:
 - a. **QAction** – This widget allots an abstract user interface action to widgets in the form of text.
 - b. **QLineEdit** – Single line input box [Tkinter alternative: Entry widget]
 - c. **QToolBar** – This widget is used to add a frame-like container to the top of the window.
5. **PyQt5.QtWebEngineWidgets.QWebEngineView** – It is used to load the content of a website directly from the internet.

SECTION II: Water Monitoring system

We wish to build a desktop GUI application (PyQt6 or PySide6) that will monitor different water sources in a locality.

Your application should show the logo of the university and the name of the developer.

Types of users

- Administrator(controls system)
- Moderator(monitors water source)
- Customer(uses application)

Your applications should have the following functionality;

- Register different types of users and types of water sources
- Store the condition of different water sources (information gotten from and must be supported by at least 3 Moderators
- Receive complaints about water sources
- Export water source information to spreadsheet
- Send warning email to users in a certain danger areas

You are free to design the layout and presentation style for the graphical user interface.