CSC3220 Lab Tutorial Topics – Timer, Web API (Image), Web API (Json)

Timer

1. QTimer references
   a. Tutorial video
      i. Tutorial 8-1 Qt Timer https://youtu.be/ZuAx2eteblA
   b. QTimer class reference
      i. https://doc.qt.io/qt-5/qtimer.html#details
   c. Code usage example
      i. https://doc.qt.io/qt-5/qtwidgets-widgets-digitalclock-example.html
      ii. Warning: It's using class inheritance, so **may not make the best match** to our Qt widget applications. Supports for this code will be provided to the limited extent.
      iii. Just for reference.
2. Web API – Image downloading
   a. Tutorial video
      i. Tutorial 8-2 Qt ImageDownload https://youtu.be/n4wt1-nB5Y8
      ii. Tutorial 8-3 Map API Set up https://youtu.be/BRrdHnD_y30
   b. Sample Image (SPU)
      i. https://spu.edu/depts/uc/VIS/images/Screen/JPEG/logo-spu-legacy-maroon.jpg
   c. How to get bing map api key:
      i. https://www.bingmapsportal.com/
      ii. Sign up, then go to 'My Account' – 'My Keys' and create a new key.
      iii. (watch tutorial for more details)
   d. Bing Map URL generator:
      i. https://staticmapmaker.com/bing/
   e. Bing Static Map document:
      i. https://docs.microsoft.com/en-us/bingmaps/rest-services/imagery/get-a-static-map
   f. Code samples:
      i. https://wiki.qt.io/Download_Data_from_URL
      ii. Use a little bit **different scheme** from the tutorial, so I recommend for you to follow the tutorial codes. Supports for this code will be provided to the limited extent.
   g. Class references:
      i. https://doc.qt.io/qt-5/qpixmap.html
3. Web API – Weather API
   a. Tutorial video
      i. Tutorial 8-4 Weather API Set up https://youtu.be/-d4lIohHTKU
      ii. Tutorial 8-5 Qt Weather API Implementation https://youtu.be/teZqJonZxrE
   b. OpenWeatherMap
      i. https://openweathermap.org/api
      ii. https://home.openweathermap.org/api_keys
      iii. https://samples.openweathermap.org/data/2.5/weather?zip=94040,us&appid=b6907d289e10d714a6e88b30761fae22 (sample address)
      iv. https://api.openweathermap.org/data/2.5/weather?zip=98119,us&units=imperial&appid=your_own_app_id
   c. Class references:
      i. https://doc.qt.io/qt-5/qjsonobject.html