
Subject: Re: Coroutines package for U++
Posted by [Oblivion](#) on Wed, 09 Nov 2022 21:52:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,

As per Lance's request, I am adding some "non-trivial" coroutines examples to the package. To demonstrate its usage, I have started with adapting the uppsrc/reference/GuiWebDownload example, so that it can be compared:

```
#include <CtrlLib/CtrlLib.h>
#include <CoRoutines/CoRoutines.h>

// GuiWebDownloader example, adapted to coroutines.

using namespace Upp;

CoRoutine<void> HttpDownload(const String& url)
{
    Progress pi;
    String path = AppendFileName(Nvl(GetDownloadFolder(), GetHomeDirFile("downloads")),
    GetFileName(url));
    HttpRequest http(url);
    http.Timeout(0);
    int loaded = 0;
    {
        FileOut out(path);
        http.WhenContent = [&out, &loaded](const void *ptr, int size) { out.Put(ptr, size); loaded += size;
    };
    while(http.Do()) {
        if(http.GetContentLength() >= 0) {
            pi.SetText("Downloading " + GetFileName(url));
            pi.Set((int)loaded, (int)http.GetContentLength());
        }
        else {
            pi.Set(0, 0);
            pi.SetText(http.GetPhaseName());
        }
        if(pi.Canceled())
            http.Abort();
        else
            co_await CoSuspend();
    }
}

if(http.IsFailure()) {
```

```

DeleteFile(path);
Exclamation("Download has failed.&\1" +
(http.IsError()
? http.GetErrorDesc()
: AsString(http.GetStatusCode()) + ' ' + http.GetReasonPhrase()));
}
}

GUI_APP_MAIN
{
StdLogSetup(LOG_COUT|LOG_FILE);

String url = "http://downloads.sourceforge.net/project/upp/upp/4179/upp-x11-src-4179.tar.gz";

for(;;) {
if(!EditText(url, "Download", "URL"))
return;
auto downloader = HttpDownload(url); // Multiple downloaders can be created/run at once.
try
{
while(downloader.Do())
Sleep(1); // Simulate work.
}
catch(const Exc& e)
{

}
catch(...)
{

}
}
}
}

```

Best regards,
Oblivion
