0. Pre-requisite : Visual Studio 20XX

1. Go to https://geant4.web.cern.ch/download/11.3.0.html and click "Download zip":

2. Unpack *geant4-v11.3.0.zip* to to a location you like. Let's suppose it is

   X:\XX\XXX\Geant4

   Then *X:\XX\XXX\Geant4\geant4-v11.3.0* would be the source directory. You can find a CMakeLists.txt file in this directory.

3. Open the Developer Command Prompt for VS20XX :

   (Start → Visual Studio 20XX → Visual Studio Tools → Developer Command Prompt for VS20XX)

   Run the "cl" command to confirm that you have the MSVC compiler:

```
> cl

Microsoft (R) C/C++ Optimizing Compiler Version 19.25.28614 for x86

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usage: cl [ option... ] filename... [ /link linkoption... ]
```

4. Change to the *X:\XX\XXX\Geant4* directory. Create a build directory and `cd` to it:
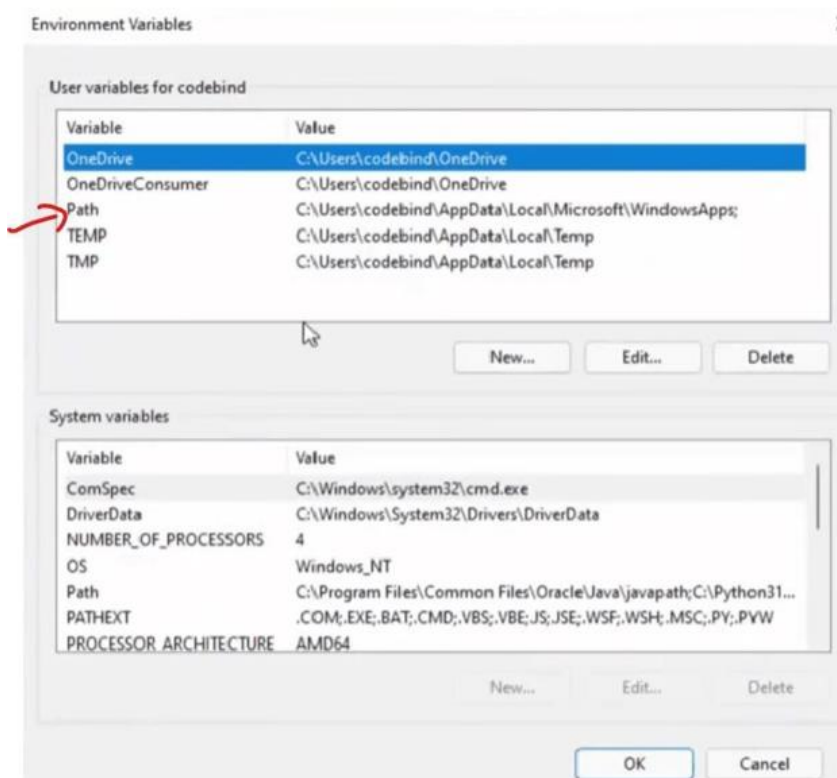
```
> mkdir geant4-v11.3.0-build

> cd geant4-v11.3.0-build
```

5. Configure and run the build in the build directory. (After all the steps, a folder *geant4-v11.3.0-install* will appear. You don't need to create it by yourself) :

```
>  cmake -DCMAKE_INSTALL_PREFIX="X:\XX\XXX\Geant4\geant4-v11.3.0-
install" -DGEANT4_INSTALL_DATA=ON - DGEANT4_USE_OPENGL_WIN32=ON
"X:\XX\XXX\Geant4\geant4-v11.3.0"

(some screen output)

>  cmake --build . --config Release

(some screen output)

>  cmake --build . --config Release --target install
```

(This step may take an hour to finish)

6. The folder *geant4-v11.3.0-install* should appear. Add the path

   X:\XX\XXX\Geant4\geant4-v11.3.0-install\bin to the PATH value:

7. Also create the following new environment variables:

Environment variables	Values
G4ABLADATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4ABLA3.3
G4ENSDFSTATEDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4ENSDFSTATE3.0
G4INCLDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4INCL1.2
G4LEDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4EMLOW8.6.1
G4LEVELGAMMADATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\PhotonEvaporation6.1
G4NEUTRONHPDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4NDL4.7.1
G4PARTICLEXSDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4PARTICLEXS4.1
G4PIIDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4PII1.3
G4RADIOACTIVEDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\RadioactiveDecay6.1.2
G4REALSURFACEDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\RealSurface2.2
G4SAIDXSDATA	X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\data\G4SAIDDATA2.0

8. The installation is in finished. You can keep only *geant4-v11.3.0-install* and remove other folders. Let's run an example job. Go to *X:\XX\XXX\Geant4\geant4-v11.3.0-install\share\Geant4\examples\basic\B1* :

```
>  mkdir build

>  cd build

>  cmake ..

>  msbuild B1.sln /p:Configuration=Release
```

You should now find an executable in *\build\Release*. Run the following in *\build*:

```
>  Release\exampleB1.exe
```

(Or you can simply click the file by your mouse)

If everything is OK, the following window should pop out: