

# openPASS

- setup development environment -
  - create simulation application -
  - perform simulation -
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## I. System requirements

- Windows 7x64
- a PCM accident database by GIDAS in Access 2002-2003 format
- Administrator privileges
- Internet connection

## II. Setup Qt

1. Install Qt 5.6.2 with MinGW 4.9.2 32bit from:  
<https://www.qt.io/download/>  
(during the installation process MinGW 4.9.2 needs to be chosen as an additional component for installation)
2. Set environment variables (for Windows):
  - a. Go to  
"Control Panel\System"
  - b. Navigate to  
"Advanced system settings > Advanced > Environment Variables > System variables"
  - c. Edit the variable "Path" and add at the end:  
C:\Qt\Qt5.6.2\Tools\mingw492\_32\bin;c:\Qt\Qt5.6.2\5.6\mingw49\_32\bin\;

## III. Setup source code

1. Extract the source code to "c:\OpenPASS\Source"  
(path must be short to avoid compilation and execution issues)
2. Open "c:\OpenPASS\Source\Global.pri" and define binary output folders  
(DIR\_DEBUG and DIR\_RELEASE)
3. Delete all "\*.pro.user" files, if any found
4. Start Qt Creator
5. Open "OpenPass\_PCM\_UseCase.pro" (when opening the first time you will have to "Configure" the project)
6. On the left navigate to "Projects > Build & Run > Build Settings > General" and toggle on "Shadow build"
7. (Re-)Build the project "OpenPass\_PCM\_UseCase"  
(executables, dynamic libraries and resources will be created and placed in the folder defined in step 2)

## IV. Run simulation

1. Execute “openPASS.exe”
2. (Re-)Activate the tab “**PCM-Simulation**”
  - a. Select a PCM database file obtained from GIDAS
  - b. Define system configurations (multiple systems per agent must be separated by a semicolon)
  - c. Define output directory (relative paths are allowed)
  - d. Select PCM cases to be simulated
  - e. Start simulation
3. Simulation results are written to comma-separated files \*.csv and (additionally) openSCENARIO format \*.xosc
4. Activate the tab “**PCM-Evaluation**”
  - a. Select the folder, you defined in 2.c
  - b. Highlight the PCM cases, you want to be presented (multiple selection with Ctrl and Shift is possible)
5. Activate the tab “**System**”
  - a. Drag and drop system components in the system space
  - b. Modify parameters
  - c. Connect inputs and outputs
  - d. Save your system
  - e. Select your system in the tab “PCM-Simulation”
  - f. Follow the steps 2–4