

CLANG++ MANUAL

- Create toolchain

```
python $NDK/build/tools/make_standalone_toolchain.py --arch <abi> --api <level> --install-dir <path>
```

```
thach.phamminh@SA2WKS0415 D:\env\android-ndk-r16b\build\tools
> python make_standalone_toolchain.py --arch arm --api 18 --install-dir D:\mtj\standalone_toolchain
```

- Extra toolchain from zip file

- Build object file

```
arm-linux-androideabi-clang++ -c ./src/Calculator.cpp -o ./bin/Calculator.o -I ./include --sysroot=sysroot
```

```
thach.phamminh@SA2WKS0415 D:\mtj\write\android\NDK\Add_CPP_Prebuilt_Library\prebuilt-libs-sam\app\calculator
> D:\mtj\toolchain\arm-linux-androideabi\bin\arm-linux-androideabi-clang++ -c ./src/Calculator.cpp -o ./bin/Calculator.o -I ./include --sysroot=D:\mtj\toolchain\arm-linux-androideabi\sysroot
```

- Build shared library

```
arm-linux-androideabi-clang++ -shared ./bin/Calculator.o -o ./lib/armeabi-v7a/libcalculator.so --sysroot=sysroot
```

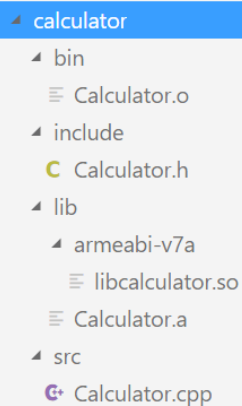
```
thach.phamminh@SA2WKS0415 D:\mtj\write\android\NDK\Add_CPP_Prebuilt_Library\prebuilt-libs-sam\app\calculator
> D:\mtj\toolchain\arm-linux-androideabi\bin\arm-linux-androideabi-clang++ -shared ./bin/Calculator.o -o ./lib/armeabi-v7a/libcalculator.so --sysroot=D:\mtj\toolchain\arm-linux-androideabi\sysroot
```

- Build static library

```
arm-linux-androideabi-ar.exe -rcs ./lib/Calculator.a ./bin/Calculator.o
```

```
thach.phamminh@SA2WKS0415 D:\mtj\write\android\NDK\Add_CPP_Prebuilt_Library\prebuilt-libs-sam\app\calculator
> D:\mtj\standalone_toolchain\bin\arm-linux-androideabi-ar.exe -rcs ./lib/Calculator.a ./bin/Calculator.o
```

- Folder tree overview



```
calculator
├── bin
│   └── Calculator.o
├── include
│   └── Calculator.h
├── lib
│   ├── armeabi-v7a
│   │   └── libcalculator.so
│   └── Calculator.a
├── src
│   └── Calculator.cpp
```

- Build script overview



MainActivity.java



build.bat x

```
1  @echo on
2
3  SET CC=D:\mtj\toolchain\arm-linux-androideabi\bin\arm-linux-androideabi-clang++
4  SET SYSROOT=D:\mtj\toolchain\arm-linux-androideabi\sysroot
5
6  SET AR=D:\mtj\standalone_toolchain\bin\arm-linux-androideabi-ar.exe
7
8  %CC% -c ./src/Calculator.cpp -o ./bin/Calculator.o -I ./include --sysroot=%SYSROOT%
9  %CC% -shared ./bin/Calculator.o -o ./lib/armeabi-v7a/libcalculator.so --sysroot=%SYSROOT%
10 %AR% -rcs ./lib/Calculator.a ./bin/Calculator.o
```