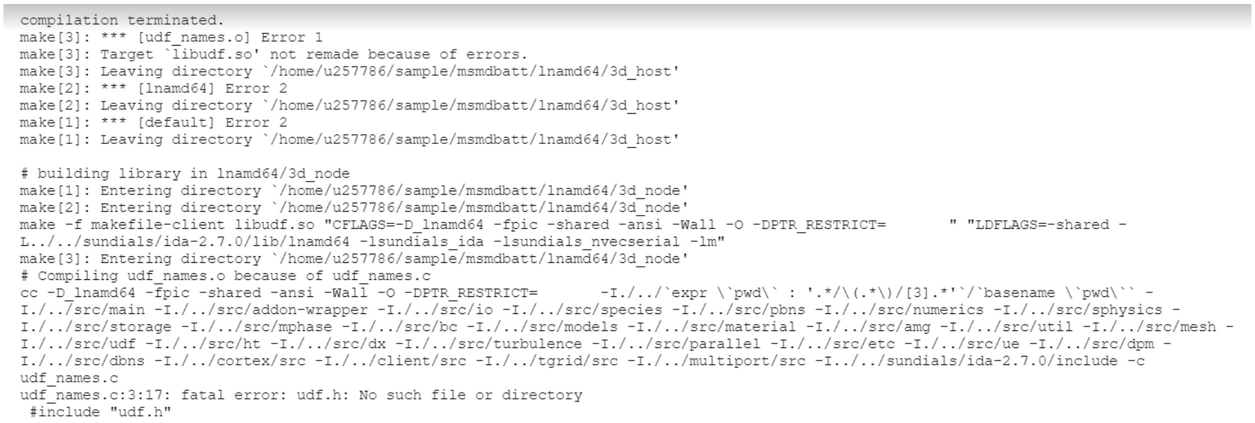
Compilation error while compiling the MSMD user defined battery model after copying in the local directory in Linux machine.

Problem/Description:

The following error pops up while compiling user defined MSMD battery model



```
compilation terminated.
make[3]: *** [udf_names.o] Error 1
make[3]: Target `libudf.so' not remade because of errors.
make[3]: Leaving directory `/home/u257786/sample/msmdbatt/lnamd64/3d_host'
make[2]: *** [lnamd64] Error 2
make[2]: Leaving directory `/home/u257786/sample/msmdbatt/lnamd64/3d_host'
make[1]: *** [default] Error 2
make[1]: Leaving directory `/home/u257786/sample/msmdbatt/lnamd64/3d_host'

# building library in lnamd64/3d_node
make[1]: Entering directory `/home/u257786/sample/msmdbatt/lnamd64/3d_node'
make[2]: Entering directory `/home/u257786/sample/msmdbatt/lnamd64/3d_node'
make -f makefile-client libudf.so "CFLAGS=-D_lnamd64 -fpic -shared -ansi -Wall -O -DPTR_RESTRICT=       " "LDFLAGS=-shared -
L../../sundials/ida-2.7.0/lib/lnamd64 -lsundials_ida -lsundials_nvecserial -lm"
make[3]: Entering directory `/home/u257786/sample/msmdbatt/lnamd64/3d_node'
# Compiling udf_names.o because of udf_names.c
cc -D_lnamd64 -fpic -shared -ansi -Wall -O -DPTR_RESTRICT=       -I./../`expr \`pwd\` : '.*/\(.*\)/[3].*'`/`basename \`pwd\`` -
I./../src/main -I./../src/addon-wrapper -I./../src/io -I./../src/species -I./../src/pbns -I./../src/numerics -I./../src/sphysics -
I./../src/storage -I./../src/mphase -I./../src/bc -I./../src/models -I./../src/material -I./../src/amg -I./../src/util -I./../src/mesh -
I./../src/udf -I./../src/ht -I./../src/dx -I./../src/turbulence -I./../src/parallel -I./../src/etc -I./../src/ue -I./../src/dpm -
I./../src/dbns -I./../cortex/src -I./../client/src -I./../tgrid/src -I./../multiport/src -I../../sundials/ida-2.7.0/include -c
udf_names.c
udf_names.c:3:17: fatal error: udf.h: No such file or directory
 #include "udf.h"
```

Solution:

The following procedure must be used for compiling user defined battery modules.
Compiling procedure for Linux

Step 1: Make a local copy of the msmdbatt directory.
Important: The custom version of the library must be named according to the convention used by ANSYS Fluent: for example, msmdbatt.
Step 2: Change directories to the msmdbatt/src directory.
Step 3: Make changes to the cae_user.c file.
Step 4: Edit the make file located in the src/ directory and make sure that the FLUENT_INC variable correctly refers to the current ANSYS Fluent installation directory. Be careful not to leave any trailing spaces when you make your changes.
Step 5: Define the FLUENT_ADDONS environment variable to correspond to your customized version of the Battery module.
Step 6: Change directories to the msmdbatt/ directory.
Issue the following make command:
make FLUENT_INC=[ansys_inc/v181/fluent] FLUENT_ARCH=[arch]-f Makefile-client
where your_arch is lnamd64 on LINUX.

The following example demonstrates the steps required to set up and run a customized version of the Battery module that is located in a folder call home/sample:

(i) Make a directory (for example, mkdir-p /home/sample).

(ii) Copy the default addon library to this location.

```
cp -RH [ansys_inc/v181/fluent]/fluent18.1.0/addons/msmdbatt
 /home/sample/msmdbatt
```

(iii) Using a text editor, make the appropriate changes to the cae_user.c file located in /home/sample/msmdbatt/src/cae_user.c

(iv) Edit the makefile located in the src/ directory and make sure that the FLUENT_INC variable correctly refers to the current ANSYS Fluent installation directory. Be careful not to leave any trailing spaces when you make your changes.

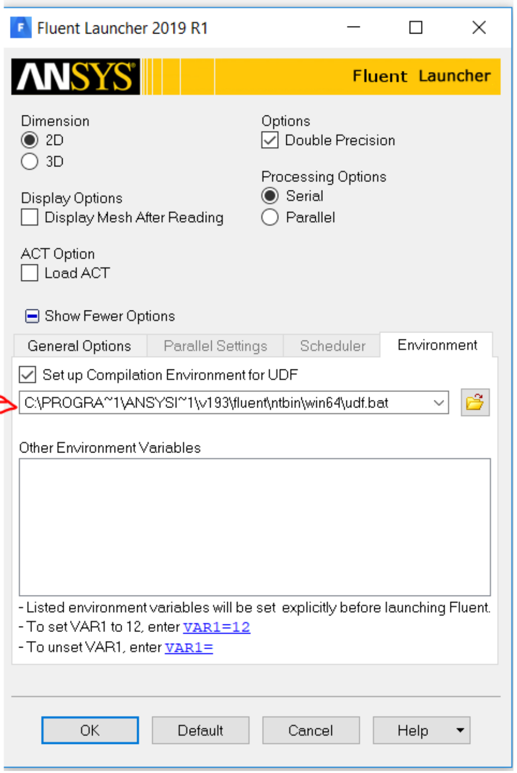
(v) Build the library.

```
cd /home/sample/msmdbatt make FLUENT_INC=[ansys_inc/v181/fluent]
FLUENT_ARCH=[arch]-f Makefile-client
```

(vi) Set the `FLUENT_ADDONS` environment variable (using CSH, other shells will differ). `setenv FLUENT_ADDONS /home/sample`

(vii) Start ANSYS Fluent and load the customized module using the text interface command.

If the above procedure did not work well, change the environment directory for UDF in the launching window.



Dimension
● 2D
○ 3D

Options
☑ Double Precision

Processing Options
● Serial
○ Parallel

Display Options
□ Display Mesh After Reading

ACT Option
□ Load ACT

⊟ Show Fewer Options

☑ Set up Compilation Environment for UDF

C:\PROGRA~1\ANSYSI~1\v193\fluent\ntbin\win64\udf.bat

Other Environment Variables

- Listed environment variables will be set explicitly before launching Fluent.
- To set VAR1 to 12, enter VAR1=12
- To unset VAR1, enter VAR1=

Change the local directory here (home/sample/)