cmake\_minimum\_required(VERSION 3.5.1)

project(grid\_map\_demos)

set(CMAKE\_CXX\_STANDARD 11)

add\_compile\_options(-Wall -Wextra -Wpedantic)

set(CMAKE\_EXPORT\_COMPILE\_COMMANDS ON)

## Find catkin macros and libraries

find\_package(catkin REQUIRED COMPONENTS

roscpp

grid\_map\_core

grid\_map\_ros

grid\_map\_cv

grid\_map\_filters

grid\_map\_loader

grid\_map\_msgs

grid\_map\_octomap

grid\_map\_rviz\_plugin

grid\_map\_visualization

geometry\_msgs

sensor\_msgs

cv\_bridge

octomap\_msgs

filters

)

find\_package(OpenCV REQUIRED

COMPONENTS

opencv\_highgui

CONFIG

)

find\_package(octomap REQUIRED)

###################################

## catkin specific configuration ##

###################################

## The catkin\_package macro generates cmake config files for your package

## Declare things to be passed to dependent projects

## INCLUDE\_DIRS: uncomment this if your package contains header files

## LIBRARIES: libraries you create in this project that dependent projects also need

## CATKIN\_DEPENDS: catkin\_packages dependent projects also need

## DEPENDS: system dependencies of this project that dependent projects also need

catkin\_package(

INCLUDE\_DIRS include

# LIBRARIES ${PROJECT\_NAME}

CATKIN\_DEPENDS

# DEPENDS system\_lib

)

###########

## Build ##

###########

## Specify additional locations of header files

## Your package locations should be listed before other locations

include\_directories(

include

${catkin\_INCLUDE\_DIRS}

${EIGEN3\_INCLUDE\_DIR}

${OCTOMAP\_INCLUDE\_DIR}

)

## Declare a cpp executable

add\_executable(simple\_demo

src/simple\_demo\_node.cpp

)

add\_executable(tutorial\_demo

src/tutorial\_demo\_node.cpp

)

add\_executable(iterators\_demo

src/iterators\_demo\_node.cpp

src/IteratorsDemo.cpp

)

add\_executable(image\_to\_gridmap\_demo

src/image\_to\_gridmap\_demo\_node.cpp

src/ImageToGridmapDemo.cpp

)

add\_executable(grid\_map\_to\_image\_demo

src/grid\_map\_to\_image\_demo\_node.cpp

src/GridmapToImageDemo.cpp

)

add\_executable(octomap\_to\_gridmap\_demo

src/octomap\_to\_gridmap\_demo\_node.cpp

src/OctomapToGridmapDemo.cpp

)

add\_executable(move\_demo

src/move\_demo\_node.cpp

)

add\_executable(iterator\_benchmark

src/iterator\_benchmark.cpp

)

add\_executable(opencv\_demo

src/opencv\_demo\_node.cpp

)

add\_executable(resolution\_change\_demo

src/resolution\_change\_demo\_node.cpp

)

add\_executable(filters\_demo

src/filters\_demo\_node.cpp

src/FiltersDemo.cpp

)

add\_executable(normal\_filter\_comparison\_demo

src/normal\_filter\_comparison\_node.cpp

)

add\_executable(interpolation\_demo

src/interpolation\_demo\_node.cpp

src/InterpolationDemo.cpp

)

## Specify libraries to link a library or executable target against

target\_link\_libraries(

simple\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

tutorial\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

iterators\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

image\_to\_gridmap\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

grid\_map\_to\_image\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

octomap\_to\_gridmap\_demo

${catkin\_LIBRARIES}

${OCTOMAP\_LIBRARIES}

)

target\_link\_libraries(

move\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

iterator\_benchmark

${catkin\_LIBRARIES}

)

target\_link\_libraries(

opencv\_demo

${catkin\_LIBRARIES}

${OpenCV\_LIBRARIES}

)

target\_link\_libraries(

resolution\_change\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

filters\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

normal\_filter\_comparison\_demo

${catkin\_LIBRARIES}

)

target\_link\_libraries(

interpolation\_demo

${catkin\_LIBRARIES}

)

#############

## Install ##

#############

catkin\_install\_python(

PROGRAMS scripts/image\_publisher.py

DESTINATION ${CATKIN\_PACKAGE\_BIN\_DESTINATION}

)

# Mark executables and/or libraries for installation

install(

TARGETS

filters\_demo

image\_to\_gridmap\_demo

grid\_map\_to\_image\_demo

interpolation\_demo

iterator\_benchmark

iterators\_demo

move\_demo

normal\_filter\_comparison\_demo

octomap\_to\_gridmap\_demo

opencv\_demo

resolution\_change\_demo

simple\_demo

tutorial\_demo

ARCHIVE DESTINATION ${CATKIN\_PACKAGE\_LIB\_DESTINATION}

LIBRARY DESTINATION ${CATKIN\_PACKAGE\_LIB\_DESTINATION}

RUNTIME DESTINATION ${CATKIN\_PACKAGE\_BIN\_DESTINATION}

)

# Mark other files for installation

install(

DIRECTORY config data doc launch rviz scripts

DESTINATION ${CATKIN\_PACKAGE\_SHARE\_DESTINATION}

)

##############

## Test ##

##############

if(CATKIN\_ENABLE\_TESTING)

catkin\_add\_gtest(${PROJECT\_NAME}-test

test/empty\_test.cpp

)

add\_dependencies(${PROJECT\_NAME}-test

filters\_demo

image\_to\_gridmap\_demo

grid\_map\_to\_image\_demo

interpolation\_demo

iterator\_benchmark

iterators\_demo

move\_demo

normal\_filter\_comparison\_demo

octomap\_to\_gridmap\_demo

opencv\_demo

resolution\_change\_demo

simple\_demo

tutorial\_demo

)

target\_include\_directories(${PROJECT\_NAME}-test PRIVATE

include

)

target\_include\_directories(${PROJECT\_NAME}-test SYSTEM PUBLIC

${catkin\_INCLUDE\_DIRS}

)

target\_link\_libraries(${PROJECT\_NAME}-test

gtest\_main

${catkin\_LIBRARIES}

)

###################

## Code\_coverage ##

###################

find\_package(cmake\_code\_coverage QUIET)

if(cmake\_code\_coverage\_FOUND)

add\_gtest\_coverage(

TEST\_BUILD\_TARGETS

${PROJECT\_NAME}-test

)

endif()

endif()

#################

## Clang\_tools ##

#################

find\_package(cmake\_clang\_tools QUIET)

if(cmake\_clang\_tools\_FOUND)

add\_default\_clang\_tooling(

DISABLE\_CLANG\_FORMAT

)

endif(cmake\_clang\_tools\_FOUND)