# Lecture: 19-1

Prerequisites for this lecture are: 18-1, 18-2 and 18-3.

- add a doom3 button which runs chisel and doom3
- firstly it needs to compile the .txt file into a .map file
- secondly it needs to dmap tile .map into the doom3 format

```
def buttons ():
    return [touchqui.image tile (button list ("power"),
                                 touchqui.posX (0.95), touchqui.posY (1.0),
                                 100, 100, myquit),
            touchqui.image tile (button list ("export"),
                                 touchqui.posX (0.0), touchqui.posY (1.0),
                                 100, 100, myexport),
            touchqui.image tile (private list ("doom3"),
                                 touchgui.posX (0.05), touchqui.posY (1.0),
                                 100, 100, mydoom3),
            touchqui.image tile (button list ("smaller"),
                                 touchqui.posX (0.0), touchqui.posY (0.10),
                                 100, 100, myzoom, True),
            touchqui.image tile (button list ("larger"),
                                 touchqui.posX (0.95), touchqui.posY (0.10),
                                 100, 100, myzoom, False)]
```

#### Sandpit/touchmap/touchmap.py

```
def mydoom3 (param, tap):
    pygame.display.update () # flush all graphic changes to screen
    pygame.time.delay (toggle_delay * 2) # pause
    pygame.quit () # shutdown pygame
    dmap () # run chisel and dmap doom3 compile
    exec_doom_map () # now run doom3
    quit () # quit python
```

```
def dmap ():
    os.system ("d3 +dmap tiny.map +quit")

def exec_doom_map ():
    os.system ("d3 +map tiny.map")
```

- maybe you can improve the code so that it checks whether it needs to export the map
- the whole area of check pointing and saving maps has not been addressed
  - you might want to consider this aspect of the touchmap

Sandpit/touchmap/touchmap.py

blank\_t, wall\_t, door\_t, spawn\_t, hell\_t, tick\_t = range (6) # enumerated types

```
class button:
    ...
    def to_blank (self):
        self._tile.set_images (blank_list ("wallv", cell_size))
    def to_wall (self):
        self._tile.set_images (wall_list ("v", cell_size))
    def to_door (self):
        self._tile.set_images (door_list ("v", cell_size))
    def to_hell (self):
        self._tile.set_images (private_list ("hellknight"))
    def to_tick (self):
        self._tile.set_images (private_list ("tick"))
    ...
```

```
def cellback (param, tap):
    global clicked, cell_array, button_array, double_tapped_cell
    clicked = True
    ...
    elif old == "|":
        # door -> blank
        button.to_blank ()
        cell_array.set_contents (x + xoffset, y + yoffset, " ")
    elif old in ["H", "S", "T"]:
        # remove asset
        button.to_blank ()
        cell_array.set_contents (x + xoffset, y + yoffset, " ")
        exclude_asset (old)
    ...
```