

## Lecture: 15-1

- Prerequisites for this lecture are: 14-1, 14-2 and 14-3.



## Work flow for touchmap, chisel, penguin tower, doom3 usage

- touchmap should be able produce a text map which is suitable for penguin tower, isometric penguin tower and doom3
- all maps are in text, doom3 maps and penguin tower maps can be produced using touchmap and chisel

## Work flow for touchmap, chisel, penguin tower, doom3 usage

- using a terminal in the vmware or R-Pi linux type:

- ```
$ d3
```

- this will take a few seconds and will:
  - create a set of configuration files for doom3
  - download the chisel source code from github and place it into:  
`$HOME/Sandpit/chisel`
- it then starts up doom3

## chisel

- after the doom3 window appears open up another command line terminal and type:

```
$ cd  
$ cd Sandpit/chisel/python  
$ ls ../maps  
$ ./developer-txt2map ../maps/three.txt
```

## Chisel map: three.txt

`$HOME/Sandpit/chisel/maps/three.txt`

```
define 1 room 1
define 2 room 2
define 3 room 3
define s worldspawn
define o monster monster_demon_imp
define h monster monster_demon_hellknight
define S monster monster_demon_tick
```

```
#####
# 1                # 2                #
#                  #                  #
# s          o    .                #
#                  .                #
#          #####                h  #
#          #                  #
#          #                  #
#####..#####
# 3                #
#      S                #
#                  #
#####
```

## Touchmap

- should eventually generate text files similar to `three.txt`
- `chisel` will produce `doom3` and `penguin tower` equivalents from your text map

## Touchmap

- now return to the doom3 window and press the tilde key `~`
  - this enables the in game doom3 console
- in this console type: `dmap tiny.map`
  - `dmap bsp` compiles the `tiny.map`
- once this is complete, type in the doom3 console: `map tiny.map`
  - which loads in the bsp compiled map `tiny.map`
- notice that the output from `chisel` is always `tiny.map`
  - this is for convenience and configuration
  - `chisel` can output the file into any named file if necessary



# Penguin Tower

- is a multiplayer 2 dimensional game
  - inspired by [Morloc Tower](http://www.mobygames.com/game/dunjonquest-morlocs-tower) `<http://www.mobygames.com/game/dunjonquest-morlocs-tower>` although Penguin Tower is very different
- however the screen layout and many of the key commands are the same

## Penguin Tower

- you can download a copy of the game from [here](http://floppsie.comp.glam.ac.uk/download/penguin-tower/penguin-tower-2.0.tar.gz) `<http://floppsie.comp.glam.ac.uk/download/penguin-tower/penguin-tower-2.0.tar.gz>`.

- you then need to extract the archive using the following command line:

- ```
$ mkdir $HOME/Sandpit  
$ cd $HOME/Sandpit  
$ wget http://floppsie.comp.glam.ac.uk/download/penguin-tower/penguin-tower-2.0.tar.gz  
$ tar zxvf penguin-tower-2.0.tar.gz
```

## Creating important directories

- these directories need to be created before penguin tower can be built

- ```
$ mkdir -p $HOME/Sandpit
$ cd $HOME/Sandpit
$ mkdir -p $HOME/opt/bin
$ mkdir -p build-ptower
```

## Building Penguin Tower

- you should be able to build it by typing:

```
$ cd $HOME/Sandpit
$ mkdir -p build-ptower
$ cd build-ptower
$ ../penguin-tower-2.0/configure --prefix=$HOME/opt
$ make
$ cd ..
```

- you need to check that the make program above exited with no error messages
- note the build will recreate all images in the build directory.

## Installing your own copy of Penguin Tower

- you can install your own copy of Penguin Tower into your directory (\$HOME/opt) specified by the `--prefix` to the `./configure` command

- ```
$ cd $HOME/Sandpit
$ mkdir -p build-ptower
$ cd build-ptower
$ make install
$ cd ..
```

## Penguin Tower keyboard controls

- [keyboard controls](#) `<ptower.html>`.

## Configure notes

- you only need to execute `../penguin-tower-2.0/configure --prefix=$HOME/opt` once ever in this directory (unless you modify the package)
- check out the documentation [here](#) `<ptower.html>`.

