

## Activity Three: House building

The next file we'll be looking at is `buildHouse.py` which you can find in the `Adventure3` folder. Open up the file as usual, and hit the `F5` key to see the results.



Now look at the code and try and work out how we could change it:

```
# Import necessary modules
import mcpi.minecraft as minecraft
import mcpi.block as block

# Connect to Minecraft
mc = minecraft.Minecraft.create()

# A constant, that sets the size of your house
SIZE = 20

# Get the players position
pos = mc.player.getTilePos()

# Decide where to start building the house, slightly away from player
x = pos.x + 2
y = pos.y
z = pos.z

# Calculate the midpoints of the front face of the house
midx = x+SIZE/2
midy = y+SIZE/2
```

```
# Build the outer shell of the house
mc.setBlocks(x, y, z, x+SIZE, y+SIZE, z+SIZE, block.COBBLESTONE.id)

# Carve the insides out with AIR
mc.setBlocks(x+1, y, z+1, x+SIZE-2, y+SIZE-1, z+SIZE-2, block.AIR.id)

# Carve out a space for the doorway
mc.setBlocks(midx-1, y, midx+1, y+3, z, block.AIR.id)

# Carve out the left hand window
mc.setBlocks(x+3, y+SIZE-3, z, midx-3, midy+3, z, block.GLASS.id)

# Carve out the right hand window
mc.setBlocks(midx+3, y+SIZE-3, z, x+SIZE-3, midy+3, z, block.GLASS.id)

# Add a wooden roof
mc.setBlocks(x, y+SIZE, z, x+SIZE, y+SIZE, z+SIZE, block.WOOD.id)

# Add a woollen carpet, the colour is 14, which is red.
mc.setBlocks(x+1, y-1, z+1, x+SIZE-2, y-1, z+SIZE-2, block.WOOL.id, 14)

# END
```

Play around with the code to see if you can:

- Change the size of the house
- Change its position (can it float?)
- Move the doors and windows
- Change the inner and outer materials

Once you're done, try opening up `buildStreet.py` in the same folder. Run it to see what happens, and see if you can work out how!