Block manipulation

Part 1 (changing shape)

Spoiler (click to hide)

This is how to change the shape of your block

First you have to add 2 things after the public int idDropped in your block file
1.

```
        public boolean isOpaqueCube()
        {
                return false;
        }
```

2.

```
        public boolean renderAsNormalBlock()
        {
                return false;
        }
```

Then you have to set the blockbounds bellow the super(i, j) thing, just like this

```
        public BlockMyblock (int i, int j)
        {
                super(i ,j, Material.glass);
                setBlockBounds(0.25F, 0F, 0.25F, 0.75F, 1F, 0.75F);
        }
```

To make you understand how blockbounds works go see this spoiler

Spoiler (click to hide)

(0F, 0F, 0F, 1F, 1F, 1F)
(0.5F, 0F, 0F, 1F, 1F, 1F)
(0F, 0.5F, 0F, 1F, 1F, 1F)
(0F, 0F, 0.5F, 1F, 1F, 1F)
(0F, 0F, 0F, 0.5F, 1F, 1F)
(0F, 0F, 0F, 1F, 0.5F, 1F)
(0F, 0F, 0F, 1F, 1F, 0.5F)

Part 2 (changing type or render)

Spoiler (click to hide)

This is how to change the type of render of your block.

You have to add like the 1st part these two things bellow idDropped in your block file

```
        public boolean isOpaqueCube()
        {
                return false;
        }
        public boolean renderAsNormalBlock()
        {
                return false;
        }
```

And to change the render type add this

```
        public int getRenderType()
        {
                return 0;
        }
```

To make your block renderer different just change the return 0 to something in the list here

Spoiler (click to show)

Part 3 (Block shape very advanced with Techne)

Spoiler (click to hide)

You need to know how to use Techne in this tutorial. If you don't, I got a tutorial on how to use it.

This is how to implent a block with a very specify shape that you created with Techne.
Client:

mod_mymod.java

```
package net.minecraft.src;

import java.util.Random;

public class mod_mymod extends BaseModMp
{
        public static final Block Newblock = (new BlockNewblock (200, 0,
net.minecraft.src.TileEntityNewblock.class).setBlockName("Newblock"));
        public static int modelID;

        public void load()
        {
                ModLoader.addName(Newblock, "Block");

                ModLoader.registerBlock(Newblock);

                ModLoader.addRecipe(new ItemStack(Newblock, 1), (new Object[]{
                                "X", Character.valueOf('X'), Block.dirt }));

                TileEntityNewblockRenderer tileent1 = new TileEntityNewblockRenderer();
                ModLoader.registerTileEntity(TileEntityNewblock.class, "Newblock", tileent1);

                modelID = ModLoader.getUniqueBlockModelID(this, true);
        }

        public void renderInvBlock(RenderBlocks var1, Block var2, int var3, int var4)
        {
                if (var4 == Newblock.getRenderType())
                {
                        TileEntityRenderer.instance.renderTileEntityAt(new TileEntityNewblock(), 0.0D, 0.0D,
0.0D, 0.0F);
                }
        }

        public String getVersion()
        {
                return "Random";
        }
}
```

Here I created the block, loaded the TileEntity and make sure it renders the block as an item in minecraft.

BlockNewblock.java

```
package net.minecraft.src;

import java.util.Random;

public class BlockNewblock extends BlockContainer
{
        private Class anEntityClass;

        public BlockNewblock(int i, int j, Class class1)
        {
                super(i, j, Material.cloth);
                anEntityClass = class1;
        }
        public int quantityDropped(Random random)
        {
                return 1;
        }
        public boolean renderAsNormalBlock()
        {
                return false;
        }
        public int getRenderType()
        {
                return mod_mymod.modelID;
        }
        public boolean isOpaqueCube()
        {
                return false;
        }
        public boolean blockActivated(World par1World, int par2, int par3, int par4, EntityPlayer
par5EntityPlayer)
        {
                int p = MathHelper.floor_double((double)((par5EntityPlayer.rotationYaw * 4F) / 360F) + 0.5D) &
3; //this is a smart equation
                byte byte0 = 3;
                                        if (p == 0)
                                        {
                                                byte0 = 4;
                                        }
                                        if (p == 1)
                                        {
                                                byte0 = 3;
                                        }
                                        if (p == 2)
                                        {
                                                byte0 = 2;
                                        }
                                        if (p == 3)
                                        {
                                                byte0 = 1;
                                        }

                                        par1World.setBlockMetadataWithNotify(par2, par3, par4, byte0);

                  return true;
        }
        public TileEntity getBlockEntity()
        {
                return new TileEntityNewblock();
        }
}
```

If your block is little and you see in minecraft that the selection of the block is big you can add a block bounds.

ModelNewblock.java

```
public void renderModel(float f5)
  {
          Shape1.render(f5);
          Shape2.render(f5);
  }
```

This part is made with Techne, you just have to add this thing for each part of your block.

TileEntityNewblock.java

```
package net.minecraft.src;

public class TileEntityNewblock extends TileEntity
{
        public TileEntityNewblock()
        {
        }
}
```

Here you don't have to put anything.

TileEntityNewblockRenderer.java

```
package net.minecraft.src;

import org.lwjgl.opengl.GL11;
import org.lwjgl.opengl.GL12;

public class TileEntityNewblockRenderer extends TileEntitySpecialRenderer
{
        private ModelNewblock model;

        public TileEntityNewblockRenderer()
        {
                model = new ModelNewblock();
        }

        public void renderAModelAt(TileEntityNewblock tile, double d, double d1, double d2, float f)
        {
                int i = 0;
                int j = 0;
                                if (i == 0)
                                {
                                        j = 0;
                                }

                                if (i == 1)
                                {
                                        j = 90;
                                }

                                if (i == 2)
                                {
                                        j = 180;
                                }

                                if (i == 3)
                                {
                                        j = 270;
                                }
                                if (tile.worldObj != null)
                                {
                                        i = tile.getBlockMetadata();
                                }
                                bindTextureByName("/Mods/Newblock.png");
                                GL11.glPushMatrix(); //start
                                GL11.glTranslatef((float)d + 0.5F, (float)d1 + 1.5F, (float)d2 + 0.5F);
                                GL11.glRotatef(j, 0.0F, 1.0F, 0.0F);
                                GL11.glScalef(1.0F, -1F, -1F);
                                model.renderModel(0.0625F);
                                GL11.glPopMatrix(); //end
        }
        public void renderTileEntityAt(TileEntity tileentity, double d, double d1, double d2, float f)
        {
                renderAModelAt((TileEntityNewblock) tileentity, d, d1, d2, f);
        }
}
```

Server:

Do the same thing but you don't have to put the modelNewblock.java and the TileEntityNewblock.java
For mod_mymod.java, delete modloader.addName, tileent1 at the end of modloader.registerTileEntity and this in public void load() :

```
TileEntityNewblockRenderer tileent1 = new TileEntityNewblockRenderer();
```

And delete this too:

```
public void renderInvBlock(RenderBlocks var1, Block var2, int var3, int var4)
        {
                if (var4 == Newblock.getRenderType())
                {
                        TileEntityRenderer.instance.renderTileEntityAt(new TileEntityNewblock(), 0.0D, 0.0D,
0.0D, 0.0F);
                }
        }
```

Credit: Ducky.