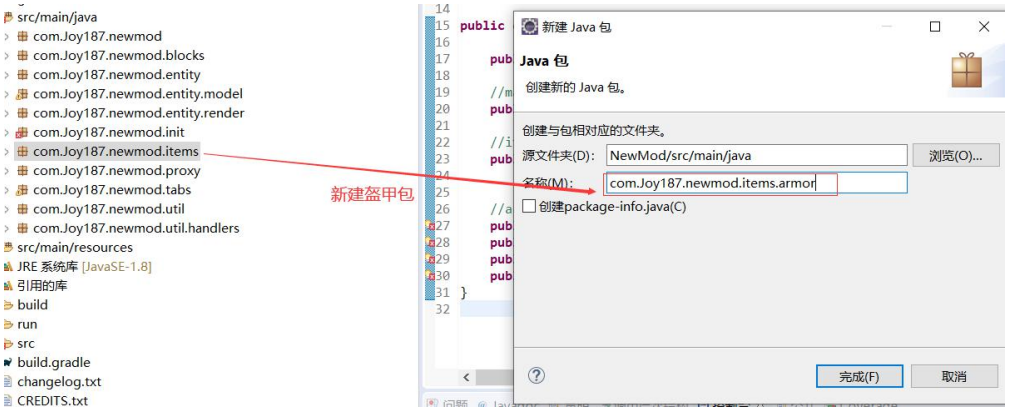
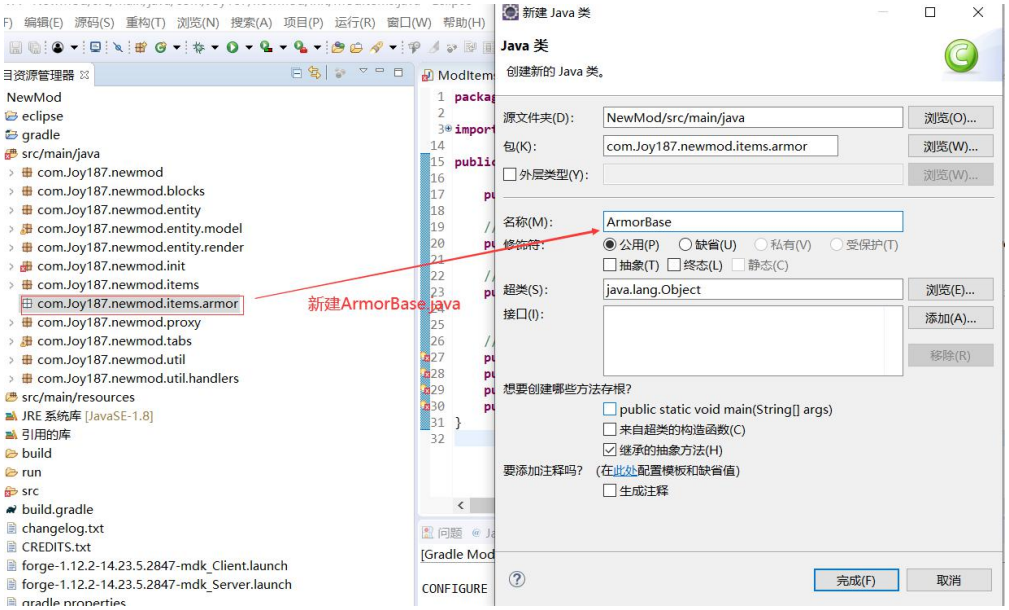
盔甲套装

本次我们尝试在 Minecraft 中创造一套盔甲套装

1. 在 items 包下新建 armor 包：



在 armor 包中新建 ArmorBase 类：



在 ArmorBase.java 中编写代码：

```
package com.Joy187.newmod.items.armor;

import com.Joy187.newmod.Main;
import com.Joy187.newmod.init.ModItems;
import com.Joy187.newmod.util.IHasModel;

import net.minecraft.creativetab.CreativeTabs;
import net.minecraft.inventory.EntityEquipmentSlot;
import net.minecraft.item.ItemArmor;
```

```
public class ArmorBase extends ItemArmor implements IHasModel{

    public ArmorBase(String name,ArmorMaterial materialIn, int render
IndexIn, EntityEquipmentSlot equipmentSlotIn,CreativeTabs tab) {
        super(materialIn, renderIndexIn, equipmentSlotIn);
        // TODO 自动生成的构造函数存根
        setUnlocalizedName(name);
        setRegistryName(name);
        setCreativeTab(tab);

        ModItems.ITEMS.add(this);
    }

    @Override
    public void registerModels() {
        Main.proxy.registerItemRenderer(this, 0, "inventory");
    }
}
```

2.在 init 下的 ModItem.java 中添加盔甲信息：

```
//material 根据情况更改
public static final ArmorMaterial ARMOR_MATERIAL_ZS = EnumHelper.addA
rmorMaterial(name(盔甲名称), textureName(合成材料名称), durability(耐久
值), reductionAmounts(盔甲值，包含靴子、护腿、护甲、头盔), enchantability
(附魔能力), soundOnEquip(穿上盔甲的声音), toughness(盔甲硬度),钻石是 2.0F);

//armor
public static final Item ZS_HELMET = new ArmorBase("zs_helmet",ARMOR_
MATERIAL_ZS,1,EntityEquipmentSlot.HEAD,CreativeTabs.COMBAT);
public static final Item ZS_CHESTPLATE = new ArmorBase("zs_chest",ARM
OR_MATERIAL_ZS,1,EntityEquipmentSlot.CHEST,CreativeTabs.COMBAT);
public static final Item ZS_LEGGINGS = new ArmorBase("zs_leggings",AR
MOR_MATERIAL_ZS,2,EntityEquipmentSlot.LEGS,CreativeTabs.COMBAT);
public static final Item ZS_BOOTS = new ArmorBase("zs_boots",ARMOR_MA
TERIAL_ZS,1,EntityEquipmentSlot.FEET,CreativeTabs.COMBAT);
```

代码示例：

```
18 public class ModItems {
19
20     public static final List<Item> ITEMS = new ArrayList<Item>();
21
22     //material
23     public static final ArmorMaterial ARMOR_MATERIAL_ZS = EnumHelper.addArmorMaterial("armor_material_gold", Reference.Mod_I
24
25     //item
26     public static final Item LABOR_SHOVEL = new ItemBase("labor_shovel", Main.ITEM_TAB);
27
28
29     //armor
30     public static final Item ZS_HELMET = new ArmorBase("zs_helmet",ARMOR_MATERIAL_ZS,1,EntityEquipmentSlot.HEAD,CreativeTabs
31     public static final Item ZS_CHESTPLATE = new ArmorBase("zs_chest",ARMOR_MATERIAL_ZS,1,EntityEquipmentSlot.CHEST,Creative
32     public static final Item ZS_LEGGINGS = new ArmorBase("zs_leggings",ARMOR_MATERIAL_ZS,2,EntityEquipmentSlot.LEGS,Creative
33     public static final Item ZS_BOOTS = new ArmorBase("zs_boots",ARMOR_MATERIAL_ZS,1,EntityEquipmentSlot.FEET,CreativeTabs.C
34 }
35
```

我的世界伤害计算公式

Damage taken depends on the number of defense points, the toughness of the armor worn and the strength of the attack.

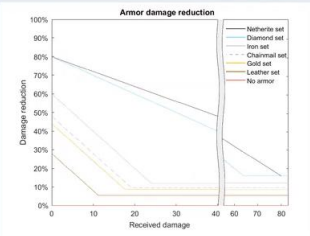
$$\text{damage} = \text{damage} \times \left(1 - \frac{\min\left(20, \max\left(\frac{\text{defensePoints}}{5}, \text{defensePoints} - \frac{\text{damage}}{2 + \frac{\text{toughness}}{4}}\right)\right)}{25}\right)$$

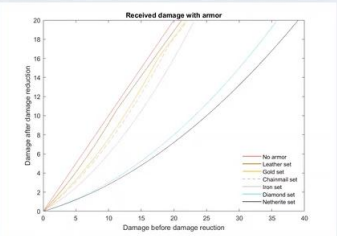
Broken down, this means that each armor point gives 4% maximum damage reduction against an incoming attack. Without toughness, this max damage reduction is lessened by 2 percentage points for each hit point of the incoming attack. 2 defense points are worth 8% protection, so the total protection that can be achieved with armor is 80%. Diamond armor protects the player from 80% of damage, iron provides 60% damage reduction, and leather provides 28%.

One piece of diamond armor (granting +2 toughness) decreases the defense reduction value for each attack hit point to 1.6%. Two diamond pieces decrease it to $4/3$% (about 1.3333%), three decrease it to $8/7$% (about 1.1428%), and four decrease it to 1%. The exact formula for the defense reduction in percent is:

```
defenseReductionInPercent = damage × 2 ÷ ( ( toughness ÷ 8 ) + 1 ) .
```

Simply put, as toughness increases, the amount of defense reduction done by high-damaging attacks is diminished, and as toughness approaches a high value (through commands), the defense reduction caused by high-damaging attacks becomes negligible. The final damage reduction value of the armor is capped at a minimum of 0.8% damage reduction per armor point, and to a maximum of 80% total. If armor is cheated in so that the min cap is larger than the max cap, the min cap is ignored. An illustration of the armor reduction is given below.





In tabular form (with a toughness of 0), damages are:

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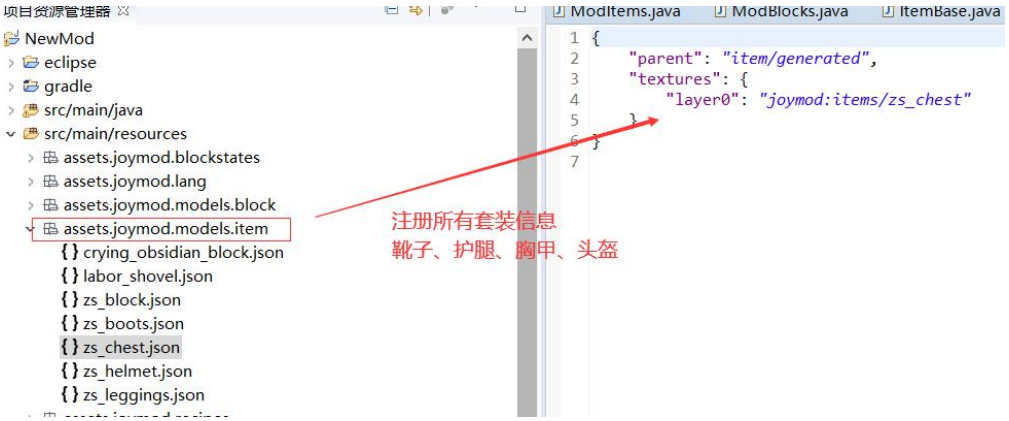
Armor	Attack damage																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00
1	0.98	1.98	2.98	3.97	4.96	5.95	6.94	7.94	8.93	9.92	10.91	11.90	12.90	13.89	14.88	15.87	16.86	17.86	18.85	19.84
2	0.94	1.92	2.94	3.94	4.92	5.90	6.89	7.87	8.86	9.84	10.82	11.81	12.79	13.78	14.76	15.74	16.73	17.71	18.70	19.68
3	0.90	1.84	2.82	3.84	4.88	5.86	6.83	7.81	8.78	9.76	10.74	11.71	12.69	13.66	14.64	15.62	16.59	17.57	18.54	19.52
4	0.86	1.76	2.70	3.68	4.70	5.76	6.78	7.74	8.71	9.68	10.65	11.62	12.58	13.55	14.52	15.49	16.46	17.42	18.39	19.36
5	0.82	1.68	2.58	3.52	4.50	5.52	6.58	7.68	8.64	9.60	10.56	11.52	12.48	13.44	14.40	15.36	16.32	17.28	18.24	19.20
6	0.78	1.60	2.46	3.36	4.30	5.28	6.30	7.36	8.46	9.52	10.47	11.42	12.38	13.33	14.28	15.23	16.18	17.14	18.09	19.04
7	0.74	1.52	2.34	3.20	4.10	5.04	6.02	7.04	8.10	9.20	10.34	11.33	12.27	13.22	14.16	15.10	16.05	16.99	17.94	18.88
8	0.70	1.44	2.22	3.04	3.90	4.80	5.74	6.72	7.74	8.80	9.90	11.04	12.17	13.10	14.04	14.98	15.91	16.85	17.78	18.72
9	0.66	1.36	2.10	2.88	3.70	4.56	5.46	6.40	7.38	8.40	9.46	10.56	11.70	12.88	13.92	14.85	15.78	16.70	17.63	18.56
10	0.62	1.28	1.98	2.72	3.50	4.32	5.18	6.08	7.02	8.00	9.02	10.08	11.18	12.32	13.50	14.72	15.64	16.56	17.48	18.40
11	0.58	1.20	1.86	2.56	3.30	4.08	4.90	5.76	6.66	7.60	8.58	9.60	10.66	11.76	12.90	14.08	15.30	16.42	17.33	18.24
12	0.54	1.12	1.74	2.40	3.10	3.84	4.62	5.44	6.30	7.20	8.14	9.12	10.14	11.20	12.30	13.44	14.62	15.84	17.10	18.08
13	0.50	1.04	1.62	2.24	2.90	3.60	4.34	5.12	5.94	6.80	7.70	8.64	9.62	10.64	11.70	12.80	13.94	15.12	16.34	17.60
14	0.46	0.96	1.50	2.08	2.70	3.36	4.06	4.80	5.58	6.40	7.26	8.16	9.10	10.08	11.10	12.16	13.26	14.40	15.58	16.80
15	0.42	0.88	1.38	1.92	2.50	3.12	3.78	4.48	5.22	6.00	6.82	7.68	8.58	9.52	10.50	11.52	12.58	13.68	14.82	16.00
16	0.38	0.80	1.26	1.76	2.30	2.88	3.50	4.16	4.86	5.60	6.38	7.20	8.06	8.96	9.90	10.88	11.90	12.96	14.06	15.20
17	0.34	0.72	1.14	1.60	2.10	2.64	3.22	3.84	4.50	5.20	5.94	6.72	7.54	8.40	9.30	10.24	11.22	12.24	13.30	14.40
18	0.30	0.64	1.02	1.44	1.90	2.40	2.94	3.52	4.14	4.80	5.50	6.24	7.02	7.84	8.70	9.60	10.54	11.52	12.54	13.60
19	0.26	0.56	0.90	1.28	1.70	2.16	2.66	3.20	3.78	4.40	5.06	5.76	6.50	7.28	8.10	8.96	9.86	10.80	11.78	12.80
20	0.22	0.48	0.78	1.12	1.50	1.92	2.38	2.88	3.42	4.00	4.62	5.28	5.98	6.72	7.50	8.32	9.18	10.08	11.02	12.00

Note that these damage values are lower if a player wears pieces of diamond armor or has toughness added to the armor through commands. Without using cheats, armor values of 16 and above i
impossible to obtain without at least one piece of diamond or netherite armor.

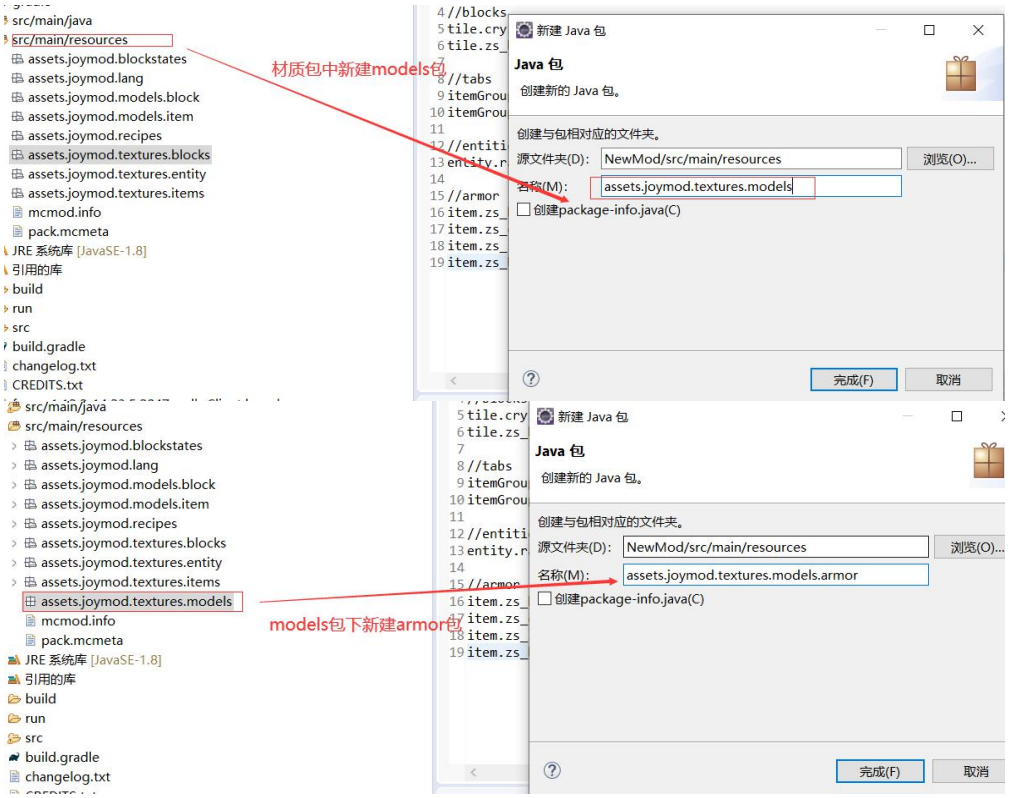
3.注册物品信息 在 model.item 包下 将所有套装的信息进行注册



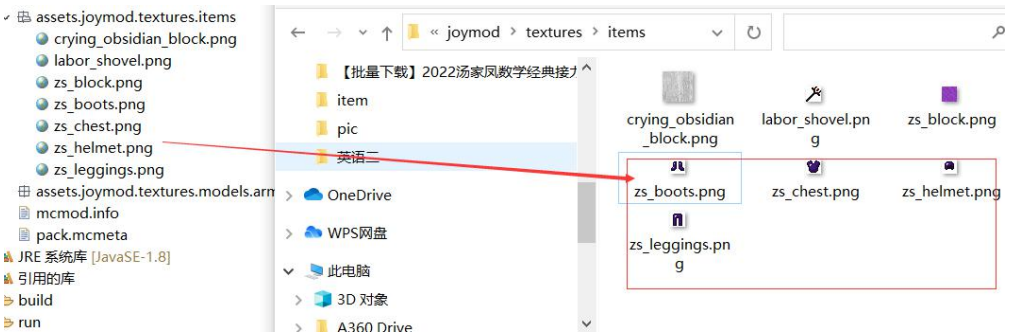
4.在语言包中添加四中防具的游戏内名称

5.防具材质设置

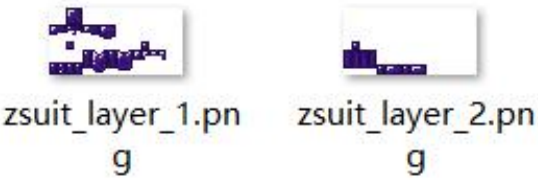
在 textures 包下新建 models 包，之后在 models 包下新建 armor 包



将我们准备好的四种护具材质放入 items 包中(物品栏中显示用)



将两种全身材质放入 armor 包中:



6. 保存文件 -> 运行游戏

切换生存模式，全身效果属性全部正常显示！

游戏内成功显示护具！