## Equipment Design Documentation

**Such Life**

# **[General Info]**

This section will encompass common things that both Armor and Weapon have.

***Rarity***

There will be 6 tiers of equipment, each will have different conditions on how each sub-stat is given.

**[Equipment Rarity]**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Rarity | Surplus (gray) | Common (green) | Uncommon (blue) | Epic (purple) | Legendary (gold) | Mythic (red) |
| # of starting sub-stats | 1 | 1 | 2 | 3 | 4 | 5 |
| Max # of sub-stats | 3 | 3 | 3 | 4 | 4 | 5 |
| Note |  |  |  |  |  | Usually have pre-determine stats |

***Crafting***

You must obtain a blueprint first before you craft your equipment. Blueprints for items from Surplus to Legendary can be obtained through research. Mythic item blueprints can only be obtained through doing boss fights. If you do not like equipment that you just craft, you can recycle it to get **floor(half)** of the hunting material back. The refund amount increases depending on the blacksmith level of the MC. When calculating the percent reduction on crafting related requirement, always use **floor()** to get the final number.

***Enhancements***

You can enhance your equipment up to +20, and every 4 levels, the sub-stats can either be added in or will be randomly upgraded. Equipment has a [wear and tear system](#WearAndTearSystem). Below is the enhancement chart for all the available rarity. For future-proof, please record the percentage stat increase/new substats.

**[Equipment enhancement]**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Grade*** | +4 | +8 | +12 | +16 | +20 |
| Surplus | Substat enhance | New substat | Substat enhance | New substat | Substat enhance |
| Common | Substat enhance | New substat | Substat enhance | New substat | Substat enhance |
| Uncommon | Substat enhance | Substat enhance | Substat enhance | New substat | Substat enhance |
| Epic | Substat enhance | Substat enhance | New substat | Substat enhance | Substat enhance |
| Legendary | Substat enhance | Substat enhance | Substat enhance | Substat enhance | Substat enhance |
| Mythic | Substat enhance | Substat enhance | Substat enhance | Substat enhance | Substat enhance |

As you enhance your equipment, the EXP requirement increases. The increase will be linear most of the time. The total EXP = Base EXP \* Sum of all multipliers. For example: the base exp of a Mythic item is 500, and the sum of the multiplier is 205.25, therefore, the total EXP that it takes for the player to enhance a Mythic item up to max level is 102,625.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Exp | 150 | 200 | 250 | 300 | 400 | 500 |

**[EXP requirement for enhancement]**

|  |  |
| --- | --- |
| EXP level enhancement | Multiplier |
| +0 | 1.0x |
| +1 | 1.25x |
| +2 | 1.5x |
| +3 | 2.0x |
| +4 | 2.5x |
| +5 | 3.5x |
| +6 | 4.5x |
| +7 | 5.0x |
| +8 | 5.5x |
| +9 | 6.0x |
| +10 | 6.5x |
| +11 | 7.0x |
| +12 | 8.0x |
| +13 | 9.0x |
| +14 | 10.0x |
| +15 | 13.0x |
| +16 | 17.0x |
| +17 | 21.0x |
| +18 | 24.0x |
| +19 | 27.0x |
| +20 | 30.0x |

Multiplier increase linear for most of the enhancement level until the few levels at the end. When the stat is a decimal, use **round it up to the nearest whole number**. This multiplier applies to all rarity. The multiplier will be calculated using base main stat. For example, if an equipment with a base stat of 10% atk that is enhanced to +12, the result would be 37.5% attack increase, but since we are rounding up to the nearest whole number, the result would be 38% atk.

**[Main stat multiplier]**

|  |  |  |
| --- | --- | --- |
| Level enhancement | Multiplier | Increment |
| +0 | 1.0x |  |
| +1 | 1.2x | 0.2 |
| +2 | 1.4x | 0.2 |
| +3 | 1.6x | 0.2 |
| +4 | 1.8x | 0.2 |
| +5 | 2.0x | 0.2 |
| +6 | 2.2x | 0.2 |
| +7 | 2.4x | 0.2 |
| +8 | 2.6x | 0.2 |
| +9 | 2.85x | 0.25 |
| +10 | 3.15x | 0.25 |
| +11 | 3.45x | 0.25 |
| +12 | 3.75x | 0.25 |
| +13 | 4.05x | 0.25 |
| +14 | 4.35x | 0.25 |
| +15 | 4.65x | 0.25 |
| +16 | 4.95x | 0.25 |
| +17 | 5.3x | 0.35 |
| +18 | 5.8x | 0.50 |
| +19 | 6.55x | 0.75 |
| +20 | 8x | 1.45 |

***Substats Rolling Range calculation***

Adding any new substat through equipment enhancement will be done using this formula:

, where ‘t’ is the total number of substats, and ‘n’ is the number of substats that is already in that gear and number 1 there is the main stat. You cannot have duplicate substats and the newly added substat cannot be the same as the main stat. For example, a ring has an %Atk main stats and 3 other substats. There are total of 12 substats, including %Atk and 3 other substats. According to the formula, chances of getting a substat x = = . As there are more substats, the chance of getting substat ‘x’ will increase.

***Substats increase probability***

**[Attack]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 20 | 0.5 | 22 | 0.5 | 24 | 0.5 | 26 | 0.5 | 28 | 0.5 | 41 | 0.5 |
| 21 | 0.5 | 23 | 0.5 | 25 | 0.5 | 27 | 0.5 | 29 | 0.5 | 42 | 0.5 |
| 22 | 4 | 24 | 4 | 26 | 4 | 28 | 4 | 30 | 4 | 43 | 4 |
| 23 | 4 | 25 | 4 | 27 | 4 | 29 | 4 | 31 | 4 | 44 | 4 |
| 24 | 4 | 26 | 4 | 28 | 4 | 30 | 4 | 32 | 4 | 45 | 4 |
| 25 | 7 | 27 | 7 | 29 | 7 | 31 | 7 | 33 | 7 | 46 | 7 |
| 26 | 7.5 | 28 | 7.5 | 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 47 | 7.5 |
| 27 | 7.5 | 29 | 7.5 | 31 | 7.5 | 33 | 7.5 | 35 | 7.5 | 48 | 7.5 |
| 28 | 7.5 | 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 49 | 7.5 |
| 29 | 8 | 31 | 8 | 33 | 8 | 35 | 8 | 37 | 8 | 50 | 8 |
| 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 38 | 7.5 | 51 | 7.5 |
| 31 | 7.5 | 33 | 7.5 | 35 | 7.5 | 37 | 7.5 | 39 | 7.5 | 52 | 7.5 |
| 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 38 | 7.5 | 40 | 7.5 | 53 | 7.5 |
| 33 | 7 | 35 | 7 | 37 | 7 | 39 | 7 | 41 | 7 | 54 | 7 |
| 34 | 7 | 36 | 7 | 38 | 7 | 40 | 7 | 42 | 7 | 55 | 7 |
| 35 | 4 | 37 | 4 | 39 | 4 | 41 | 4 | 43 | 4 | 56 | 4 |
| 36 | 4 | 38 | 4 | 40 | 4 | 42 | 4 | 44 | 4 | 57 | 4 |
| 37 | 4 | 39 | 4 | 41 | 4 | 43 | 4 | 45 | 4 | 58 | 4 |
| 38 | 0.5 | 40 | 0.5 | 42 | 0.5 | 44 | 0.5 | 46 | 0.5 | 59 | 0.5 |
| 39 | 0.5 | 41 | 0.5 | 43 | 0.5 | 45 | 0.5 | 47 | 0.5 | 60 | 0.5 |

**[%Attack]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 1 | 25.00 | 2 | 25.00 | 3 | 33.00 | 4 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 2 | 25.00 | 3 | 25.00 | 4 | 34.00 | 5 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
|  |  | 4 | 25.00 | 4 | 25.00 | 5 | 25.00 |  |  | 7 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[HP]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 220 | 0.5 | 230 | 0.5 | 240 | 0.5 | 250 | 0.5 | 260 | 0.5 | 360 | 0.5 |
| 221 | 1 | 231 | 1 | 241 | 1 | 251 | 1 | 261 | 1 | 361 | 1 |
| 222 | 1 | 232 | 1 | 242 | 1 | 252 | 1 | 262 | 1 | 362 | 1 |
| 223 | 1 | 233 | 1 | 243 | 1 | 253 | 1 | 263 | 1 | 363 | 1 |
| 224 | 1 | 234 | 1 | 244 | 1 | 254 | 1 | 264 | 1 | 364 | 1 |
| 225 | 1.5 | 235 | 1.5 | 245 | 1.5 | 255 | 1.5 | 265 | 1.5 | 365 | 1.5 |
| 226 | 1.5 | 236 | 1.5 | 246 | 1.5 | 256 | 1.5 | 266 | 1.5 | 366 | 1.5 |
| 227 | 1.5 | 237 | 1.5 | 247 | 1.5 | 257 | 1.5 | 267 | 1.5 | 367 | 1.5 |
| 228 | 1.5 | 238 | 1.5 | 248 | 1.5 | 258 | 1.5 | 268 | 1.5 | 368 | 1.5 |
| 229 | 1.5 | 239 | 1.5 | 249 | 1.5 | 259 | 1.5 | 269 | 1.5 | 369 | 1.5 |
| 230 | 2.5 | 240 | 2.5 | 250 | 2.5 | 260 | 2.5 | 270 | 2.5 | 370 | 2.5 |
| 231 | 2.5 | 241 | 2.5 | 251 | 2.5 | 261 | 2.5 | 271 | 2.5 | 371 | 2.5 |
| 232 | 2.5 | 242 | 2.5 | 252 | 2.5 | 262 | 2.5 | 272 | 2.5 | 372 | 2.5 |
| 233 | 3 | 243 | 3 | 253 | 3 | 263 | 3 | 273 | 3 | 373 | 3 |
| 234 | 3 | 244 | 3 | 254 | 3 | 264 | 3 | 274 | 3 | 374 | 3 |
| 235 | 3 | 245 | 3 | 255 | 3 | 265 | 3 | 275 | 3 | 375 | 3 |
| 236 | 4.5 | 246 | 4.5 | 256 | 4.5 | 266 | 4.5 | 276 | 4.5 | 376 | 4.5 |
| 237 | 4.5 | 247 | 4.5 | 257 | 4.5 | 267 | 4.5 | 277 | 4.5 | 377 | 4.5 |
| 238 | 5 | 248 | 5 | 258 | 5 | 268 | 5 | 278 | 5 | 378 | 5 |
| 239 | 5 | 249 | 5 | 259 | 5 | 269 | 5 | 279 | 5 | 379 | 5 |
| 240 | 5.5 | 250 | 5.5 | 260 | 5.5 | 270 | 5.5 | 280 | 5.5 | 380 | 5.5 |
| 241 | 5 | 251 | 5 | 261 | 5 | 271 | 5 | 281 | 5 | 381 | 5 |
| 242 | 5 | 252 | 5 | 262 | 5 | 272 | 5 | 282 | 5 | 382 | 5 |
| 243 | 4.5 | 253 | 4.5 | 263 | 4.5 | 273 | 4.5 | 283 | 4.5 | 383 | 4.5 |
| 244 | 4.5 | 254 | 4.5 | 264 | 4.5 | 274 | 4.5 | 284 | 4.5 | 384 | 4.5 |
| 245 | 3 | 255 | 3 | 265 | 3 | 275 | 3 | 285 | 3 | 385 | 3 |
| 246 | 3 | 256 | 3 | 266 | 3 | 276 | 3 | 286 | 3 | 386 | 3 |
| 247 | 3 | 257 | 3 | 267 | 3 | 277 | 3 | 287 | 3 | 387 | 3 |
| 248 | 2.5 | 258 | 2.5 | 268 | 2.5 | 278 | 2.5 | 288 | 2.5 | 388 | 2.5 |
| 249 | 2.5 | 259 | 2.5 | 269 | 2.5 | 279 | 2.5 | 289 | 2.5 | 389 | 2.5 |
| 250 | 2.5 | 260 | 2.5 | 270 | 2.5 | 280 | 2.5 | 290 | 2.5 | 390 | 2.5 |
| 251 | 1.5 | 261 | 1.5 | 271 | 1.5 | 281 | 1.5 | 291 | 1.5 | 391 | 1.5 |
| 252 | 1.5 | 262 | 1.5 | 272 | 1.5 | 282 | 1.5 | 292 | 1.5 | 392 | 1.5 |
| 253 | 1.5 | 263 | 1.5 | 273 | 1.5 | 283 | 1.5 | 293 | 1.5 | 393 | 1.5 |
| 254 | 1.5 | 264 | 1.5 | 274 | 1.5 | 284 | 1.5 | 294 | 1.5 | 394 | 1.5 |
| 255 | 1.5 | 265 | 1.5 | 275 | 1.5 | 285 | 1.5 | 295 | 1.5 | 395 | 1.5 |
| 256 | 1 | 266 | 1 | 276 | 1 | 286 | 1 | 296 | 1 | 396 | 1 |
| 257 | 1 | 267 | 1 | 277 | 1 | 287 | 1 | 297 | 1 | 397 | 1 |
| 258 | 1 | 268 | 1 | 278 | 1 | 288 | 1 | 298 | 1 | 398 | 1 |
| 259 | 1 | 269 | 1 | 279 | 1 | 289 | 1 | 299 | 1 | 399 | 1 |
| 260 | 0.5 | 270 | 0.5 | 280 | 0.5 | 290 | 0.5 | 300 | 0.5 | 400 | 0.5 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[%HP]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 1 | 25.00 | 2 | 25.00 | 3 | 33.00 | 4 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 2 | 25.00 | 3 | 25.00 | 4 | 34.00 | 5 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
|  |  | 4 | 25.00 | 4 | 25.00 | 5 | 25.00 |  |  | 7 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[Def (Physical resistant)]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 20 | 0.5 | 22 | 0.5 | 24 | 0.5 | 26 | 0.5 | 28 | 0.5 | 32 | 0.5 |
| 21 | 0.5 | 23 | 0.5 | 25 | 0.5 | 27 | 0.5 | 29 | 0.5 | 33 | 0.5 |
| 22 | 4 | 24 | 4 | 26 | 4 | 28 | 4 | 30 | 4 | 34 | 4 |
| 23 | 4 | 25 | 4 | 27 | 4 | 29 | 4 | 31 | 4 | 35 | 4 |
| 24 | 4 | 26 | 4 | 28 | 4 | 30 | 4 | 32 | 4 | 36 | 4 |
| 25 | 7 | 27 | 7 | 29 | 7 | 31 | 7 | 33 | 7 | 37 | 7 |
| 26 | 7.5 | 28 | 7.5 | 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 38 | 7.5 |
| 27 | 7.5 | 29 | 7.5 | 31 | 7.5 | 33 | 7.5 | 35 | 7.5 | 39 | 7.5 |
| 28 | 7.5 | 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 40 | 7.5 |
| 29 | 8 | 31 | 8 | 33 | 8 | 35 | 8 | 37 | 8 | 41 | 8 |
| 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 38 | 7.5 | 42 | 7.5 |
| 31 | 7.5 | 33 | 7.5 | 35 | 7.5 | 37 | 7.5 | 39 | 7.5 | 43 | 7.5 |
| 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 38 | 7.5 | 40 | 7.5 | 44 | 7.5 |
| 33 | 7 | 35 | 7 | 37 | 7 | 39 | 7 | 41 | 7 | 45 | 7 |
| 34 | 7 | 36 | 7 | 38 | 7 | 40 | 7 | 42 | 7 | 46 | 7 |
| 35 | 4 | 37 | 4 | 39 | 4 | 41 | 4 | 43 | 4 | 47 | 4 |
| 36 | 4 | 38 | 4 | 40 | 4 | 42 | 4 | 44 | 4 | 48 | 4 |
| 37 | 4 | 39 | 4 | 41 | 4 | 43 | 4 | 45 | 4 | 49 | 4 |
| 38 | 0.5 | 40 | 0.5 | 42 | 0.5 | 44 | 0.5 | 46 | 0.5 | 50 | 0.5 |
| 39 | 0.5 | 41 | 0.5 | 43 | 0.5 | 45 | 0.5 | 47 | 0.5 | 51 | 0.5 |

**[Def (Magic resistant)]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 20 | 0.5 | 22 | 0.5 | 24 | 0.5 | 26 | 0.5 | 28 | 0.5 | 32 | 0.5 |
| 21 | 0.5 | 23 | 0.5 | 25 | 0.5 | 27 | 0.5 | 29 | 0.5 | 33 | 0.5 |
| 22 | 4 | 24 | 4 | 26 | 4 | 28 | 4 | 30 | 4 | 34 | 4 |
| 23 | 4 | 25 | 4 | 27 | 4 | 29 | 4 | 31 | 4 | 35 | 4 |
| 24 | 4 | 26 | 4 | 28 | 4 | 30 | 4 | 32 | 4 | 36 | 4 |
| 25 | 7 | 27 | 7 | 29 | 7 | 31 | 7 | 33 | 7 | 37 | 7 |
| 26 | 7.5 | 28 | 7.5 | 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 38 | 7.5 |
| 27 | 7.5 | 29 | 7.5 | 31 | 7.5 | 33 | 7.5 | 35 | 7.5 | 39 | 7.5 |
| 28 | 7.5 | 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 40 | 7.5 |
| 29 | 8 | 31 | 8 | 33 | 8 | 35 | 8 | 37 | 8 | 41 | 8 |
| 30 | 7.5 | 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 38 | 7.5 | 42 | 7.5 |
| 31 | 7.5 | 33 | 7.5 | 35 | 7.5 | 37 | 7.5 | 39 | 7.5 | 43 | 7.5 |
| 32 | 7.5 | 34 | 7.5 | 36 | 7.5 | 38 | 7.5 | 40 | 7.5 | 44 | 7.5 |
| 33 | 7 | 35 | 7 | 37 | 7 | 39 | 7 | 41 | 7 | 45 | 7 |
| 34 | 7 | 36 | 7 | 38 | 7 | 40 | 7 | 42 | 7 | 46 | 7 |
| 35 | 4 | 37 | 4 | 39 | 4 | 41 | 4 | 43 | 4 | 47 | 4 |
| 36 | 4 | 38 | 4 | 40 | 4 | 42 | 4 | 44 | 4 | 48 | 4 |
| 37 | 4 | 39 | 4 | 41 | 4 | 43 | 4 | 45 | 4 | 49 | 4 |
| 38 | 0.5 | 40 | 0.5 | 42 | 0.5 | 44 | 0.5 | 46 | 0.5 | 50 | 0.5 |
| 39 | 0.5 | 41 | 0.5 | 43 | 0.5 | 45 | 0.5 | 47 | 0.5 | 51 | 0.5 |

**[%Def (Physical resistant)]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 1 | 25.00 | 2 | 25.00 | 3 | 33.00 | 4 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 2 | 25.00 | 3 | 25.00 | 4 | 34.00 | 5 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
|  |  | 4 | 25.00 | 4 | 25.00 | 5 | 25.00 |  |  | 7 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[%Def (Magic resistant)]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 1 | 25.00 | 2 | 25.00 | 3 | 33.00 | 4 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 2 | 25.00 | 3 | 25.00 | 4 | 34.00 | 5 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
|  |  | 4 | 25.00 | 4 | 25.00 | 5 | 25.00 |  |  | 7 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[%Effect resistant]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 1 | 25.00 | 2 | 25.00 | 3 | 33.00 | 4 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 2 | 25.00 | 3 | 25.00 | 4 | 34.00 | 5 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
|  |  | 4 | 25.00 | 4 | 25.00 | 5 | 25.00 |  |  | 7 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[%Effectiveness]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 1 | 25.00 | 2 | 25.00 | 3 | 33.00 | 4 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 2 | 25.00 | 3 | 25.00 | 4 | 34.00 | 5 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
|  |  | 4 | 25.00 | 4 | 25.00 | 5 | 25.00 |  |  | 7 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[%Crit]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 1 | 33.00 | 1 | 25.00 | 2 | 25.00 | 2 | 25.00 | 3 | 33.00 | 5 | 30.00 |
| 2 | 34.00 | 2 | 25.00 | 3 | 25.00 | 3 | 25.00 | 4 | 34.00 | 6 | 30.00 |
| 3 | 33.00 | 3 | 25.00 | 4 | 25.00 | 4 | 25.00 | 5 | 33.00 | 7 | 30.00 |
|  |  | 4 | 25.00 | 5 | 25.00 | 5 | 25.00 |  |  | 8 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

**[%CDmg]**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | | **Common** | | **Uncommon** | | **Epic** | | **Legendary** | | **Mythic** | |
|  | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) | Increase amount | Prob. (%) |
| Prob. | 2 | 33.00 | 2 | 25.00 | 3 | 25.00 | 4 | 25.00 | 5 | 33.00 | 6 | 30.00 |
| 3 | 34.00 | 3 | 25.00 | 4 | 25.00 | 5 | 25.00 | 6 | 34.00 | 7 | 30.00 |
| 4 | 33.00 | 4 | 25.00 | 5 | 25.00 | 6 | 25.00 | 7 | 33.00 | 8 | 30.00 |
|  |  | 5 | 25.00 | 6 | 25.00 | 7 | 25.00 |  |  | 9 | 10.00 |
| Total | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 |

***Material***

There will be 4 common types of materials and 1 rare material:

* Wood (Common)
* Stone (Common)
* Iron (Common)
* Mixed alloy (Common)
* Hunt material (Rare)

# **[Armor Info]**

Armor only includes the item that the MC wears. All the equipment will have stats and effects that will affect the gameplay.

***Armor overview***

There will be 6 slots for the MC to equip armor. Each piece will have a main stat and 1-4 sub-stats, depending on the rarity. The sub-stats and main stats cannot be the same for all the pieces.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gloves | Helmet | Chestplate | Boots | Ring | Dog Tag |
| Main stat | Atk | Def (Physical res) | HP | Atk | Atk | Atk |
| %Atk | %Atk | %Atk |
| HP | HP | HP |
| Def (Magic res) | %HP | %HP | %HP |
| Def (Physical res) | Def (Physical res) | Def (Physical res) |
| Def (Magic res) | Def (Magic res) | Def (Magic res) |
| %Def (Physical def) | %Def (Physical def) | %Def (Physical def) |
| %Def (Magic def) | %Def (Magic def) | %Def (Magic def) |
| %Eff Res | %Eff Res | %Eff Res |
| %Effectiveness | %Effectiveness | %Effectiveness |
| %Crit |
| %CDmg |
| Sub stat | %Atk | Atk | Atk | Every other Stats except the Main stat | | |
| HP | %Atk | %Atk |
| %HP | HP | %HP |
| %Eff Res | %HP | Def (Physical res) |
| %Effect | %Def (Physical def) | Def (Magic res) |
| %Crit | %Def (Magic def) | %Def (Physical def) |
| %CDmg | % Eff Res | %Def (Magic def) |
|  | % Effect | %Eff Res |
|  | %Crit | %Effect |
|  | %CDmg | %Crit |
|  |  | %CDmg |

***Armor Base Stat***

Equipment’s base stat is heavily dependent on the rarity. The lower the rarity, the lower the base stat. The enhancement increases proportionally, as list [above](#EnhancementsGeneral).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Gloves | | | | | |
| Stat | Attack | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat | 25 | 25 | 50 | 50 | 75 | 100 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Helmet | | | | | |
| Stat | Def | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat | 25 | 50 | 50 | 75 | 75 | 100 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Chestplate | | | | | |
| Stat | HP | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat | 50 | 50 | 150 | 250 | 300 | 400 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Boot | | | | | |
| Stat | Atk, % Atk, HP, % HP, Def (Physical res), Def (Magic res), % Def (Physical def), % Def (Magic def), % Eff Res, % Effect | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat(%) | 6 | 7 | 7 | 8 | 9 | 10 |
| Base Stat(HP) | 50 | 50 | 150 | 250 | 300 | 400 |
| Base Stat(Def) | 25 | 50 | 50 | 75 | 75 | 100 |
| Base Stat(Atk) | 50 | 50 | 75 | 75 | 100 | 200 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Ring | | | | | |
| Stat | Atk, % Atk, HP, % HP, Def (Physical res), Def (Magic res), % Def (Physical def), % Def (Magic def), % Eff Res, % Effect | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat(%) | 6 | 7 | 7 | 8 | 9 | 10 |
| Base Stat(HP) | 50 | 50 | 150 | 250 | 300 | 400 |
| Base Stat(Def) | 25 | 50 | 50 | 75 | 75 | 100 |
| Base Stat(Atk) | 50 | 50 | 75 | 75 | 100 | 200 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Dog tags | | | | | |
| Stat | Atk, % Atk, HP, % HP, Def, % Def, % Eff Res, % Effect, % Crit, % CDmg | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat(%) | 6 | 6 | 6 | 7 | 7 | 8 |
| Base Stat(HP) | 50 | 50 | 150 | 250 | 300 | 400 |
| Base Stat(Def) | 25 | 50 | 50 | 75 | 75 | 100 |
| Base Stat(Atk) | 50 | 50 | 75 | 75 | 100 | 200 |

***Substats Rolling Range***

The equation to calculate the chances of rolling a substat ‘x’ is [above](#SubstatsRollingRangeCalculation).

**[Possible Substats according to armor type]**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Equipment | **Gloves** | **Helmet** | **Chestplate** | **Boot** | **Ring** | **Dog Tag** |
| Substats | %Atk | Atk | Atk | Atk | Atk | Atk |
| HP | %Atk | %Atk | %Atk | %Atk | %Atk |
| %HP | HP | %HP | HP | HP | HP |
| Def (Physical res) | %HP | Def (Physical res) | %HP | %HP | %HP |
| Def (Magic res) | %Def (Physical def) | Def (Magic res) | Def (Physical res) | Def (Physical res) | Def (Physical res) |
| %Def (Physical def) | %Def (Magic def) | %Def (Physical def) | Def (Magic res) | Def (Magic res) | Def (Magic res) |
| %Def (Magic def) | %Eff Res | %Def (Magic def) | %Def (Physical def) | %Def (Physical def) | %Def (Physical def) |
| %Eff Res | %Effectiveness | %Eff Res | %Def (Magic def) | %Def (Magic def) | %Def (Magic def) |
| %Effectiveness | %Crit | %Effectiveness | %Eff Res | %Eff Res | %Eff Res |
| %Crit | %CDmg | %Crit | %Effectiveness | %Effectiveness | %Effectiveness |
| %CDmg |  | %CDmg | %Crit | %Crit | %Crit |
|  |  |  | %CDmg | %CDmg | %CDmg |

**[Possible Substats according to equipment]**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # of substat | 1 🡪 2 | 2 🡪 3 | 3 🡪 4 | 4 🡪 5 |
| **Gloves** | 11.11% | 12.50% | 14.29% | 16.67% |
| **Helmet** | 12.50% | 14.29% | 16.67% | 20.00% |
| **Chestplate** | 11.11% | 12.50% | 14.29% | 16.67% |
| **Boots** | 10.00% | 11.11% | 12.50% | 14.29% |
| **Ring** | 10.00% | 11.11% | 12.50% | 14.29% |
| **Dog tag** | 10.00% | 11.11% | 12.50% | 14.29% |

***Wear and Tear***

Armor has a wear and tear mechanic where when the durability of an equipment starts to reach a certain threshold, debuffs on the piece of equipment starts to occur. You can repair the damaged equipment using the appropriate hunting material. Wear and Tear system only applies to Gloves, Helmet, Chestplate, and Boots. When calculating the repair cost (gold) and repair cost (hut material), use **ceil()**.

**[Equipment Wear and Tear calculation]**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Type | ***Gloves, Helmet, Chestplate, Boots*** | | | | | | |
| Wear | **100% - 75%** | | **74% - 50%** | | **49% - 25%** | | **24% - 0%** |
| Debuffs | *-0% main stats* | | *-5% main stats* | | *-10% main stats* | | *-20% main stats* |
| ***Rarity*** | Repair cost (hunt material) | | | Repair cost (Gold) | | | |
| Blacksmith level 0 | Blacksmith level max | | Blacksmith level 0 | | Blacksmith level max | |
| Surplus (gray) | 100% - 75%: 1  74% - 50%: 2  49% - 25%: 3  24% - 0%: 5 | 100% - 75%: 1  74% - 50%: 2  49% - 25%: 2  24% - 0%: 4 | | 100% - 75%: 500  74% - 50%: 550  49% - 25%: 750  24% - 0%: 1,000 | | 100% - 75%: 400  74% - 50%: 440  49% - 25%: 600  24% - 0%: 800 | |
| Common (green) | 100% - 75%: 5  74% - 50%: 7  49% - 25%: 9  24% - 0%: 10 | 100% - 75%: 4  74% - 50%: 6  49% - 25%: 8  24% - 0%: 8 | | 100% - 75%: 1,500  74% - 50%: 2,000  49% - 25%: 2,500  24% - 0%: 3,000 | | 100% - 75%: 1,200  74% - 50%: 1,600  49% - 25%: 2,000  24% - 0%: 2,400 | |
| Uncommon (blue) | 100% - 75%: 12  74% - 50%: 15  49% - 25%: 19  24% - 0%: 25 | 100% - 75%: 10  74% - 50%: 12  49% - 25%: 16  24% - 0%: 20 | | 100% - 75%: 4,000  74% - 50%: 5,500  49% - 25%: 7,000  24% - 0%: 8,000 | | 100% - 75%: 3,200  74% - 50%: 4,400  49% - 25%: 5,600  24% - 0%: 6,400 | |
| Epic (purple) | 100% - 75%: 22  74% - 50%: 28  49% - 25%: 36  24% - 0%: 45 | 100% - 75%: 18  74% - 50%: 23  49% - 25%: 29  24% - 0%: 36 | | 100% - 75%: 6,000  74% - 50%: 8,000  49% - 25%: 10,000  24% - 0%: 12,000 | | 100% - 75%: 4,800  74% - 50%: 6,400  49% - 25%: 8,000  24% - 0%: 9,600 | |
| Legendary (gold) | 100% - 75%: 27  74% - 50%: 33  49% - 25%: 43  24% - 0%: 55 | 100% - 75%: 22  74% - 50%: 27  49% - 25%: 35  24% - 0%: 44 | | 100% - 75%: 9,000  74% - 50%: 12,000  49% - 25%: 15,000  24% - 0%: 18,000 | | 100% - 75%: 7,200  74% - 50%: 9,600  49% - 25%: 12,000  24% - 0%: 14,400 | |
| Mythic (red) | 100% - 75%: 37  74% - 50%: 47  49% - 25%: 60  24% - 0%: 75 | 100% - 75%: 30  74% - 50%: 38  49% - 25%: 48  24% - 0%: 60 | | 100% - 75%: 10,000  74% - 50%: 14,000  49% - 25%: 16,000  24% - 0%: 20,000 | | 100% - 75%: 8,000  74% - 50%: 11,200  49% - 25%: 12,800  24% - 0%: 16,000 | |

***Armor Set overview***

Armor set will give the MC some stats boost or other special effects. There will be a 2-piece set and 4-piece set. There will be roughly around 10 sets as of now.

1. Attack Set (2-pieces)
   1. Increase Attack by 30%
2. Defend Set (2-pieces)
   1. Increase Defend by 30%
3. Health Set (2-pieces)
   1. Increase Health by 30%
4. Nimble Set (4-pieces)
   1. Increase dodge chance by 30%.
5. Reflection Set (4-pieces)
   1. Reflects 30% damage dealt back to the attacker.
6. Magic Pen Set (2-pieces)
   1. Reduce target’s magic resist by 10% before dealing damage
7. Armor Pen Set (2-pieces)
   1. Reduce target’s armor by 10% before dealing damage
8. Energy Regen Set (4-pieces) (Do not implement yet)
   1. Give you a boost in energy regeneration for your ultimate
9. Emergency Protection Set (4-pieces)
   1. Grant a shield based on your health and def stats when health falls below 50%. Grant continuous healing when health is below 20%. Both effects can be activated at the same time. Cooldown: 10 seconds
10. Phantom set (4-pieces)
    1. Increase based dodge chance by 15%
11. Striker set (2-pieces)
    1. Increase crit chance by 15%
12. Demolition set (2-pieces)
    1. Increase crit damage by 30%

***Crafting***

Gloves, Rings, Dog Tag will have different material requirements than Chestplate, Helmet, Boots

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Type | ***Gloves, Rings, Dog Tag*** | | | | | | | |
| ***Rarity*** | Material required | | Material refunded | | Crafting cost (gold) per piece | | Crafting time  (second) | |
| Blacksmith level 0 | Blacksmith level max | Blacksmith level 0 | Blacksmith level max | Blacksmith level 0 | Blacksmith level max | Blacksmith level 0 | Blacksmith level max |
| Surplus (gray) | 5 | 4 | 2 | 3 | 5,000 | 4,000 | 10 | 7.5 |
| Common (green) | 10 | 8 | 5 | 7 | 16,000 | 12,800 | 10 | 7.5 |
| Uncommon (blue) | 25 | 20 | 12 | 18 | 35,000 | 28,000 | 10 | 7.5 |
| Epic (purple) | 45 | 36 | 22 | 33 | 45,000 | 36,000 | 10 | 7.5 |
| Legendary (gold) | 55 | 44 | 27 | 41 | 55,000 | 44,000 | 10 | 7.5 |
| Mythic (red) | 75 | 60 | 37 | 56 | 70,000 | 56,000 | 10 | 7.5 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Type | ***Chestplate, Helmet, Boots*** | | | | | | | |
| ***Rarity*** | Material required | | Material refunded | | Crafting cost (gold) per piece | | Crafting time  (second) | |
| Blacksmith level 0 | Blacksmith level max | Blacksmith level 0 | Blacksmith level max | Blacksmith level 0 | Blacksmith level max | Blacksmith level 0 | Blacksmith level max |
| Surplus (gray) | 10 | 8 | 5 | 7 | 7,000 | 5,600 | 15 | 11.25 |
| Common (green) | 15 | 12 | 7 | 11 | 18,000 | 14,400 | 15 | 11.25 |
| Uncommon (blue) | 30 | 24 | 15 | 22 | 37,000 | 29,600 | 15 | 11.25 |
| Epic (purple) | 50 | 40 | 25 | 37 | 47,000 | 37,600 | 15 | 11.25 |
| Legendary (gold) | 60 | 48 | 30 | 45 | 57,000 | 45,600 | 15 | 11.25 |
| Mythic (red) | 85 | 68 | 42 | 63 | 77,000 | 61,600 | 15 | 11.25 |

***Sub-Stats overview***

***Sub-Stats overview***

# **[Weapon Info]**

***Weapon base stats***

There are 3 categories of weapons: melee, ranged, hybrid. They both have similar stats but for ranged will have infinite total ammo but limited “capacity”. Ranged weapons can pierce through enemy, while melee weapons can hit multiple entities at once. Hybrid will be the combination of both types.

* Melee:
  + Attack: base Attack
  + Attack moves speed: Time (second) it takes to fully complete an attack move.
  + Durability: Usage time before breaking or become unusable
  + Reinforce: Overflow repair will be converted into this bar. Boost weapon’s damage when this bar has a value that is bigger than 0
* Ranged:
  + Attack: base Attack
  + Firing rate: RPM (Rounds per minute)
  + Durability: usage time before breaking or become unusable
  + Pierce: number of entities the projectile can go through
  + Reload speed: time it takes to replace the current “mag” with a new one
  + Capacity: amount of projectile you can shoot before having to go through reload animation
* Hybrid
  + Attack: base Attack
  + Firing rate: RPM (Rounds per minute).
  + Attack moves speed: Time (second) it takes to fully complete an attack move.
  + Durability: usage time before breaking or become unusable
  + Pierce: number of entities the projectile can go through
  + Capacity: amount of projectile you can shoot before having to go through reload animation

***Weapon rarity***

Weapon will have a base attack stat and the rarity will add in additional attack stat to the base stat. The [enhancement multiplier](#MainStatMultiplier) will only apply to the base attack stat. For example, a weapon with a base stat (Melee) stat of 25 with an enhancement of +20 with a legendary rarity will have the total attack of: (25\*8) + 100 = 300 attack. For hybrid weapon, you just calculate the total attack of melee and ranged separately and do not add them together.

**[Rarity additional attack]**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Melee | | | | | |
| Stat | Attack | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat (Melee) | +50 | +50 | +75 | +75 | +100 | +200 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Hybrid | | | | | |
| Stat | Attack | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat (Melee) | +50 | +50 | +75 | +75 | +100 | +200 |
| Base Stat (Ranged) | +25 | +25 | +50 | +50 | +75 | +100 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Ranged | | | | | |
| Stat | Attack | | | | | |
| Rarity | Surplus | Common | Uncommon | Epic | Legendary | Mythic |
| Base Stat (Ranged) | +25 | +25 | +50 | +50 | +75 | +100 |

***Wear and Tear System***

Weapons have a slightly different wear and tear system than that of armor. You don’t need to spend material to repair, but instead, you would either sharpen your bladed weapon or reinforce your blunt weapon using their respective kit. As durability decreases until a certain threshold, debuffs start to occur. You can use repair kit indefinitely, but it takes time to repair, and you can only move around with 20% of your walking speed. If you have 100% durability, you can still use the repair kit, but it will fill up the ‘reinforce’ bar instead. When the enhance bar reaches a certain threshold, buffs will start to occur. Every time a player hits an entity, durability decreases by 0.5%.

**[Repair kits]**

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Repair time | Amount repair | Moving speed while repair |
| Whetstone | 5s | 25% | 20% of original speed |
| Polisher | 4s | 20% | 20% of original speed |
| Jamming Rod | 3s | 25% | 40% of original speed |

**[Wear and Tear debuffs]**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Wear | **100% - 75%** | **74% - 50%** | **49% - 25%** | **24% - 0%** |
| Debuffs | *-0% main stats* | *-5% main stats* | *-10% main stats* | *-20% main stats* |

**[Wear and Tear buffs]**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Wear | **100% - 75%** | **74% - 50%** | **49% - 25%** | **24% - 0%** |
| Debuffs | *+20% main stats* | *+15% main stats* | *+10% main stats* | *+5% main stats* |

***Enhancement***

Weapons will not have substats but instead have perks slots that you can slot runes into it. Total # of rune slots depends on the rarity of the weapon and as you enhance your weapon, more rune slots will be unlocked. Weapons will still be subjected to the same base stats [multiplier](#MainStatMultiplier).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Grade | **Surplus** | **Common** | **Uncommon** | **Epic** | **Legendary** | **Mythic** |
| # of rune slots | 0 | 1 | 2 | 3 | 4 | 5 |

**[# of runes slot for weapon]**

**[Weapon enhancement]**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Grade*** | +4 | +8 | +12 | +16 | +20 |
| Surplus |  |  |  |  |  |
| Common |  |  | Rune Slot unlocked |  |  |
| Uncommon | Rune Slot unlocked |  | Rune Slot unlocked |  | Rune Slot unlocked |
| Epic |  | Rune Slot unlocked | Rune Slot unlocked | Rune Slot unlocked |  |
| Legendary | Rune Slot unlocked | Rune Slot unlocked |  | Rune Slot unlocked | Rune Slot unlocked |
| Mythic | Rune Slot unlocked | Rune Slot unlocked | Rune Slot unlocked | Rune Slot unlocked | Rune Slot unlocked |

***Melee Weapon Archetypes***

Each melee weapon falls under an archetype. There will be 3 types of attack: Jab, Swing, and Charged (which is equivalent to a light attack, medium attack and a charged attack). A charged attack reduces your movement speed by 90% for the duration of the charging. Once your battle-fury meter is full, you can activate it to do a special move. Special move’s damage can be enhanced by doing a charged attack before activate battle-fury.

* Melee
  + Explain:
    - <<: significantly less than
    - >>: significantly greater than
    - Generally:
      * Jab speed (light) ≤ Jab speed (medium) ≤ Jab speed (heavy)
      * Swing speed (light) < Swing speed (medium) << Swing speed (heavy)
  + Light:
    - Durability: 125
    - Attack moves speed:
      * Jab: 0.2s per jab
        + Jab delay: 0.1s
      * Swing: 0.4s per swing
        + Swing delay: 0.2s
      * Charged
        + Charging:

Level 1: 1s

Level 2: +2s

Level 3: +2.5s

* + - * + Delay until the owner can charge the weapon again 1s.
  + Medium:
    - Durability: 150
    - Attack moves:
      * Jab: 0.3s per jab
        + Jab delay: 0.2s
      * Swing: 0.5s per swing
        + Swing delay: 0.3s
      * Charged
        + Charging:

Level 1: 1.5s

Level 2: +2s

Level 3: +3s

* + - * + Delay until the owner can charge the weapon again 1s.
  + Heavy:
    - Durability: 200
    - Attack moves:
      * Jab: 0.5s per jab
        + Jab delay: 0.2s
      * Swing: 0.7s per swing
        + Swing delay: 0.3s
      * Charged
        + Charging:

Level 1: 2s

Level 2: +2.5s

Level 3: +3.5s

* + - * + Delay until the owner can charge the weapon again 1s.

***Weapon List***

Note: Deal damage here is just your “applied damage” calculation, which means that the true damage part is the additional damage after you finish calculating the “applied damage”. Anything with dealing damage per second or ½ second is just “applied damage” + true damage per 1/ ½ second. For multi-step ult. When the caster cast an ultimate, an animation will play, and the caster will be invincible for the duration of that animation.

* Melee
  + Spear
    - Attack: 100
    - Archetype: Light
    - Reinforce: 100
    - Special Move: Lunge forward in a straight line at the selected direction and deal damage ((applied damage\*1.5) + 1-2-4% of the enemy’s max health as true damage) to every enemy on the path
  + Guandao
    - Attack: 150
    - Archetype: Medium
    - Reinforce: 100
    - Special Move: Smash the Guandao onto the ground and deal damage ((applied damage\*1.5) + 1-1.5-2% of the enemy’s max health as true damage) in an elongated rectangle in the selected direction and stun them for 2s.
  + Lances
    - Attack: 150
    - Archetype: Medium
    - Reinforce: 100
    - Special Move: Charges forward (can adjust direction) for 5s and pinned any enemy in front of the lance. The pinned enemy will be stuck on the lance and take damage ((applied damage\*2) + 0.5-1-1.5% of the enemy’s max health as true damage per ½ second) for the duration that they got pinned.
  + Halberd
    - Attack: 200
    - Archetype: Light
    - Reinforce: 100
    - Special Move (Multi-step ult): Lunge forward in a straight line at the selected direction and deal damage ((applied damage\*1.5) + 1-1.5-2% of the enemy’s max health as true damage) to all the enemy in the path. At the end of the path, do a 180-degree swing in the selected direction and deal damage ((applied damage\*1.5) + 0.5-1-1.5% of the enemy’s max health as true damage) to all the enemy in that direction.
  + Scythe
    - Attack: 75
    - Archetype: Light
    - Reinforce: 100
    - Special Move: Throw the Scythe in a selected direction and damage ((applied damage\*1) + 0.5-1.5-2% of the enemy’s max health as true damage per ½ second) anyone in its path. As the scythe travels it slightly knocks the enemy back and stuns them for 0.1s. Once the scythe travels for more than 3 seconds, it will return to the owner, also damaging anyone in its path, slightly knocks the enemy back and stuns them for 0.1s.
  + Claw
    - Attack: 75
    - Archetype: Light
    - Reinforce: 100
    - Special Move: Become invisible for 3s, gain 30% additional movement speed and deal damage((applied damage\*1.5) 3.5-4-5% of the enemy’s health as true damage) to the attacked opponent.
  + Dual Swords
    - Attack: 125
    - Archetype: Medium
    - Reinforce: 100
    - Special Move: Spin around like a tornado for 3s, damaging ((applied damage\*1) + 1.0-1.5-2% of the enemy’s max health as true damage per ½ second) everything surrounding it, and slightly knock the enemy back. You can control the path.
  + Sword
    - Attack: 125
    - Archetype: Medium
    - Reinforce: 100
    - Special Move: Cause the next attack to stun the enemy (boss excluded) for 2s, and deal (applied damage\*1.5) + 2.5-3-4% of the enemy’s health as true damage.
  + Dual Katana
    - Attack: 100
    - Archetype: Light
    - Reinforce: 100
    - Special Move: Dash forward in a straight line, deal damage ((applied damage\*.75) + 0.5% of the enemy’s max health as true damage), group up every enemy in its path and inflict an omen mark on everyone for 5s. You can increase the number of omen marks by dealing damage to the enemy. After 5 seconds, the omen mark will detonate, dealing damage (0.5% of the enemy’s max health as true damage per stack)
  + Katana
    - Attack: 100
    - Archetype: Light
    - Reinforce: 100
    - Special Move: Freeze time surround you and select a target in range. If there aren’t any, then the battle-fury meter will be restored. After selecting a target, teleport to that target and deal damage ((applied damage\*1.5) + 5% of the enemy’s max health as true damage) and inflict armor break for 10s.
  + Odachi
    - Attack: 175
    - Archetype: Heavy
    - Reinforce: 100
    - Special Move (Multi-step ult): Jump into the sky and select a place to slam yourself down and then the sword down to the ground. The initial impact will stun the enemy in a circular area and select the direction that you want to slam the sword down. The area of effect would be in the shape of an elongated rectangle (length of the rectangle would be bigger than the radius of the circular stun area). Any enemy that is not stun will be dealt damage ((applied damage\*1) + 5% of the enemy’s max health as true damage) and any enemy that is stun will be dealt damage ((applied damage\*2) + 7% of the enemy’s max health as true damage) and inflicted with armor break for 8 seconds. There would be a total of 5s for you to complete the action. If the timer expire, the game will select the location of your cursor as a place to land and a random direction as the sword slam position.
  + Flail
    - Attack: 200
    - Archetype: Heavy
    - Reinforce: 100
    - Special Move: Spin around like a tornado for 3s, damaging ((applied damage\*1) + 1.0-1.5-2% of the enemy’s max health as true damage per ½ second) everything surrounding it, and slightly knock the enemy back. You can control the path. Inflict [bleed](Gameplay%20Mechanics.docx) effect upon impact.
  + War Hammer
    - Attack: 250
    - Archetype: Heavy
    - Reinforce: 100
    - Special Move: Slam the hammer onto the ground and stuns everything in a Cone shape for 5-7-10s and inflicts armor break for 15s.
  + Pavise shield
    - Attack: 50 + 2% of player’s max health
    - Archetype: Heavy
    - Reinforce: 100
    - Special Move: Enlarge the shield in a selected direction and provoke entities around it for 10s. During this duration, the player is locked in a selected direction. Absorb 20% of damage taken as stored energy. When the energy reaches a certain threshold, provides buffs to the wielder. Once the timer reaches 0, the buffs will be granted to the wearer base upon the current energy level.
      * 1% 🡪 24%: empowered wielder’s next attack to deal 1-2-4% of wielder max health as true damage.
      * 25% 🡪 50%: heal wielder for 10% of the damage absorbs and empowered wielder’s next attack to deal 2-4-8% of wielder max health as true damage.
      * 51% 🡪 75%: heal wielder for 15% of their max health and empowered wielder’s next attack to deal 4-8-16% of wielder max health as true damage.
      * 76% 🡪 100%: heal wielder for 25% of their max health and empowered wielder’s next attack to deal 8-16-32% of wielder max health as true damage.
  + Double-bladed Battle Axe
    - Attack: 250
    - Archetype: Heavy
    - Reinforce: 100
    - Special Move: Sacrifice 20-25-30% of your current health and gain 5-10-15% attack speed for 10s and 10-15-30% of damage (2% of the enemy’s max health as true damage per attack) dealt will be turn into health. If the current wearer’s health is less than the sacrifice threshold, the health value will automatically become 1.
  + Rapier (Please discuss this with Your leader before you implement this weapon)
    - Attack: 150
    - Archetype: Medium
    - Reinforce: 100
    - Special Move: Adopt a [counter stance](Gameplay%20Mechanics.docx) for and reflects 25-30-40% of the total incoming damage as true damage back to attacker and heal 5-10-15% of reflected damage as health.
* Ranged (Note: Any modern firearm will be hit-scan and have a different name to their real-life counterpart, but the design will still me like that specific modern firearm)
  + Auto pistol crossbow (Please discuss this with your leader before you implement this weapon)
    - Attack: 25
    - Firing rate: 150 RPM
    - Durability: 150
    - Pierce:
      * Regular entities: 0
      * Boss entities: 0
    - Capacity: 20 arrows per mag
    - Reload Speed: 1.5s
    - Special Move: Marked the enemy with a [hunted](Gameplay%20Mechanics.docx) mark for 5s. Any projectile fire from the caster and hit the enemy with the Hunted mark will be dealt damage (applied damage + 0.5-0.75-1% of the enemy’s max health as true damage)
  + Dual crossbow: an auto crossbow with a mag from the top and a mag below. It is basically 2 crossbow slaps together, and one of the crossbows is upside down.
    - Attack: 50
    - Firing rate: 300 RPM
    - Durability: 200
    - Pierce:
      * Regular entities: 0
      * Boss entities: 0
    - Capacity: 40 arrows per 2 mags
    - Reload Speed: 2.5s
    - Special Move: Fire a barrage of arrows into the air and the arrow landed in a large rectangular area but in a wave style of pattern (landed from the front to the back). Any enemy hit will be dealt damage ((applied damage\*0.5) + 0.5-1-2% of the enemy’s max health as true damage and inflict them with “Armor break” for 10s.
  + Multi-Muskets
    - Attack: 75
    - Firing rate: ??? RPM
    - Durability: 150
    - Pierce:
      * Regular entities: 0
      * Boss entities: 0
    - Capacity: 4 round (because you have 4 muskets on you)
    - Reload Speed: 3 seconds per musket.
    - Special Move: Summon a ship that crashes into the selected location, deal damage ((applied damage\*3) + 3-3.5-5% of the enemy’s max health as true damage) in a large circular area and stun everyone in the circle for 3-4-5s (depend on how close the enemy is relative to the center of the circle). There will be sub circle corresponding to the stun time.
  + Blunderbuss
    - Attack: 150
    - Firing rate: ??? RPM
    - Durability: 200
    - Pierce:
      * Regular entities: 0
      * Boss entities: 0
    - Capacity: 1 shot
    - Reload Speed: 4s per shot
    - Special Move: Summon a pirate ship that fires into a large rectangle area in a wave pattern, deal damage ((applied damage\*2) + 0.5-1-2% of the enemy’s max health as true damage) and inflict burn for 10 seconds and stuns for 2 seconds.

# **[Tools Info]**

Tools cannot deal damage and they only have durability meter and “efficiency rating” based on the material. The Durability meter measures the # of action performed before durability reaches 0 and “efficiency rating” will measure how long does it takes to complete a task with that tool. Once a tool reaches Iron, it can no longer break, but it will have efficiency debuffs when reaches certain durability thresholds.

***Tools***

1. Axe
2. Pickaxe
3. Hoes
4. Scythe
5. Sickle
6. Shovel
7. Fishing Rod
8. Watering Bucket

***Stat Chart***

Durability (Dur.) = # of usage before durability reaches 0; Proficiency (Prof.) = Stamina cost per tool usage.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tool | Axe | | Pickaxe | | Hoes | | Scythe | | Sickle | | Shovel | | Fishing rod | | Watering bucker | |
| Dur. | Wood | 150 | Wood | 150 | Wood | 150 | Wood | 150 | Wood | 150 | Wood | 150 | Wood | 150 | Wood | 150 |
| Stone | 250 | Stone | 250 | Stone | 250 | Stone | 250 | Stone | 250 | Stone | 250 | Stone | 250 | Stone | 250 |
| Iron | 300 | Iron | 300 | Iron | 300 | Iron | 300 | Iron | 300 | Iron | 300 | Iron | 300 | Iron | 300 |
| Alloy | 700 | Alloy | 700 | Alloy | 700 | Alloy | 700 | Alloy | 700 | Alloy | 700 | Alloy | 700 | Alloy | 700 |
| Prof. | Wood | 10 | Wood | 10 | Wood | 10 | Wood | 10 | Wood | 10 | Wood | 10 | Wood | 10 | Wood | 10 |
| Stone | 8 | Stone | 8 | Stone | 8 | Stone | 8 | Stone | 8 | Stone | 8 | Stone | 8 | Stone | 8 |
| Iron | 6 | Iron | 6 | Iron | 6 | Iron | 6 | Iron | 6 | Iron | 6 | Iron | 6 | Iron | 6 |
| Alloy | 2 | Alloy | 2 | Alloy | 2 | Alloy | 2 | Alloy | 2 | Alloy | 2 | Alloy | 2 | Alloy | 2 |

***Durability Debuffs chart***

As durability decrease, the stamina cost per tool usage increases. The increase will be added into the based Proficiency above.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Durability (%) | 100 – 75 | 74 – 50 | 49 -25 | 24 – 0 |
| Wood | +0 | +1 | +2 | +4 |
| Stone | +0 | +1 | +2 | +4 |
| Iron | +0 | +1 | +2 | +4 |
| Alloy | +0 | +1 | +2 | +4 |

# **[Weapon and Tools slots]**

You can only carry one weapon at a time and cannot switch out during combat. For tools, you will have a wheel menu for quick switch, but there will be a limited amount tools you can quick switch. The Wheel menu only have 5 slots for you to select your tools. You cannot switch the tools that you are equipping on your hand. You can either put the tools away and then switch tools out of the wheel menu or scroll to the empty space.

# **[Experimental Weapons]**

* + Deagle (later)
    - Damage:
    - Firing rate: 270 RPM
    - Durability: 150
    - Pierce:
      * Regular entities: 0
      * Boss entities: 0
    - Capacity: 8+1
    - Reload Speed: 2s
    - Special Move: Gain a second Deagle on your off-hand, granted both Deagle with an armor-piercing round and infinite magazine capacity for 10s. Armor-piercing round can go through regular entities and boss, ricochet if it hits a wall or obstacles, and will “disappear” after 5 seconds.
  + AK-47 (later)
    - Damage:
    - Firing rate: 600 RPM
    - Durability: 200
    - Pierce:
      * Regular entities: 1
      * Boss entities: 0
    - Capacity: 30+1
    - Reload Speed: 3.5s
    - Special Move: Intoxicate yourself with a clear liquid. Gain a second copy of your weapon on the offhand, infinite capacity, increase fire rate by 50%, increase attack by 200%, but invert your control scheme for 10s.
      * Second option: Call in a barrage of artillery. Damage ((applied damage\*2) + 2.5-3-5% of the enemy’s max health as true damage) enemy in multiple circular area.
  + CETME Ameli (later)
    - Damage:
    - Firing rate: 900 RPM
    - Durability: 200
    - Pierce:
      * Regular entities: 1
      * Boss entities: 0
    - Capacity: 150+1 rounds
    - Reload Speed: 5s
    - Special Move: You turn yourself into a bunker for 15s. You gain infinite ammo, increase fire rate by 50%, and lay a minefield in a large rectangular area in front of you and reduce damage taken by 50%. You will be stationary and only be able to fire 180 degrees right in front of you.
  + M2 Browning (later)
    - Damage:
    - Firing rate: 550 RPM
    - Durability: 200
    - Pierce:
      * Regular entities: 2
      * Boss entities: 0
    - Capacity: 150+1 rounds
    - Reload Speed: 8s
    - Special Move: Spawn a fully functional M2 Bradley vehicle. This vehicle’s armament cannot crit and applied damage is subject to reduction due to the enemy’s armor. The vehicle will passively lose 167 health every second. When the health reaches 0, the vehicle will be destroyed.
      * Health: 50,000
      * Defense: 10,000
      * Main weapon: Chain Gun
        + Fire rate: 200 RPM
        + Base damage: 5,000
      * Secondary weapon: Anti-armor missile
        + Base damage: 10,000
        + Cooldown: 20s
        + Status effect inflicts armor break for 10s.
  + Shovel-propelled grenade: Cause aoe damage (later)
    - Damage:
    - Firing rate: 15 RPM
    - Durability: 150
    - Pierce:
      * Regular entities: 0
      * Boss entities: 0
    - Capacity: 1
    - Reload Speed: 4s
    - Special Move: Drop a Shovel-shaped nuke. Deal 20% of individual enemy’s max health as true damage. Inflicts Radiation for 10s
  + Carl Gustaf recoilless rifle: cause smaller AOE damage than Shovel-propelled grenade (later)
    - Damage:
    - Firing rate: 8 RPM
    - Durability: 200
    - Pierce:
      * Regular entities: 2
      * Boss entities: 0
    - Capacity: 1
    - Reload Speed: 7s
    - Special Move: Call AC-130 for air support. The AC-130 will stay on the field for 20s and automatically target the enemy on the ground.
      * 25mm GAU-12/U Equalizer
      * 40 mm cannon
      * 105 mm M102 howitzer
  + AA-12 (later)
    - Damage:
    - Firing rate:
    - Durability:
    - Pierce:
    - Capacity:
    - Reload Speed:
    - Special Move: Equip your AA-12 with a dragon’s breath round for 20s. Increase reload speed by 20% and fire rate by 50% but decrease damage by 50%. Inflicts burn for 5 seconds. Any hit from these rounds will reset the timer.
  + DRP-AVP (AWP) (later)
    - Damage:
    - Firing rate:
    - Durability:
    - Pierce:
    - Capacity:
    - Reload Speed:
    - Special Move:
  + Shoulder-mounted .50 BMG (later)
    - Damage:
    - Firing rate:
    - Durability:
    - Pierce:
    - Capacity:
    - Reload Speed:
    - Special Move:
* Hybrid (Later on)
  + Lance Cannon
    - Archetype: Heavy
    - Reinforce: 100
    - Firing rate: 85 RPM
    - Reload time: 3s
    - Pierce:
      * Regular entities: 2
      * Boss entities: 0
    - Capacity:
      * 8 per “mag”
    - Special Move: