

Mercenary Life

Document Version 3 – 12 Nov 2022

The game is about living the life of a mercenary. The task is to train by playing various minigames, one for each stat and then go on missions.

Character status

The Stats

The merc has 5 basic stats determining his basic abilities as well as some secondary stats determined indirectly by main stats or equipment.

Primary stats:

VIT: Vitality. Increases the merc's HP.

STR: Strength. Determines the merc's damage.

SPD: Speed. Determines the merc's attack speed. During thresholds it increases the attack multiplier.

SPI: Spirit. Increases the rate the special power gauge increases. During thresholds it increases the maximum available power points.

LCK: Luck. Increases the dodge chance, critical chance and accuracy.

Secondary stats:

HP: Hit points. Determines the merc's maximum health. HP is also used as a "timer" for minigames.

$$HP = 10 + 2 * VIT$$

DAM: Damage. Determines the damage done per hit. Depends on both the weapon and STR.

$$DAM = (STR + WEP\ DMG) * (1 + VAMB\ DMG)$$

*WEP DMG is a flat damage increase.

* VAMB DMG applies only if a Vambrace is equipped at the trinket slot and is a percentile value; otherwise it is 0.

ATSPD: Attack Speed. Determines how long the cooldown is between every "attack cycle".

$$ATSPD = 1.5 - (SPD \bmod 20)$$

*ATSPD decreases linearly between [1.5 , 0.5) based on the SPD stat. Every 20 levels it is reset to 1.5 and the player gains +1 AMUL (see AMUL below).

AMUL: Attack multiplier. Determines how many times the player attacks per "attack cycle".

$$AMUL = 1 + (SPD \div 20)$$

**AMUL increases by 1 per 20 SPD levels.*

POW/S: Power per second. Determines how much power is accumulated per second during battle for using special abilities.

$$POW/S = 0.1 + 0.0015 * SPI$$

**At 0 SPI gain 0.1 POW/S or 1 POW per 10 seconds. At 100 SPI gain 0.25 POW/s or 1 POW per 4 seconds.*

POW: Power. The maximum amount of power points that can be accumulated. Each ability requires a different amount of accumulated power to be used.

$$POW = \text{No of Special Events completed} / 2 \text{ (round up)}.$$

DEF: Defense. Reduces enemy's damage done.

$$DEF = (\text{Armor DEF} + \text{Shield DEF}) * (1 + \text{Vamb DEF penalty})$$

**DEF gives a flat damage reduction bonus*

DOD: Dodge. Gives a chance to completely dodge an enemy attack.

$$DOD = (0.001 * LCK) + \text{Armor DOD} + \text{Shield/Trinket DOD}.$$

**Dodge is a percentage change to take 0 damage. 10% Dodge chance is given from LCK.*

ACC: Accuracy. Reduces the chance an enemy dodge an attack.

$$ACC = (0.0005 * LCK) + (0.0005 * SPD) + \text{Staff ACC}.$$

** Accuracy counteracts enemy DOD.*

CRI%: Critical Chance. Gives a chance to multiply damage done.

$$CRI\% = 0.05 + (0.0015 * LCK) + \text{Wep CRI\%} + \text{Trinket CRI\%}$$

CRID: Critical Damage. The damage multiplier when a critical chance occurs.

$$CRID = 2 + \text{Wep CRID}$$

In addition, the merc has **SA** special actions that can be performed at will and use power.

Increasing Stats

Increasing any of the basic stats is done through playing minigames or buying equipment.

HP: Competing in the Colosseum. Costs money to enter. Gain money on victory.

STR: Breaking rocks in the mashing minigame.

SPD: Playing the top-down shooter minigame.

SPI: Playing the meditation minigame.

LCK: Playing the gambling minigame. Costs money but may also earn money.

SA: New Special Abilities SA are unlocked after bosses and after the special training minigame every few total lvls. Special abilities are used in 1v1 fights including Colosseum fights and Warfare bosses.

Secondary stats may be affected by armor as well as primary stats.

Status Tiers

Every 20 lvls is a status tier. Initially, the player can reach a maximum level of 20 on each skill for a total of 100 levels indicating a complete tier.

There are 5 tiers total for a maximum level of 100 per skill or 500 lvl total. Each tier requires double the xp per lvl of the previous tier, but each tier's level requires the same amount of XP.

Breaking through to the next tier requires completing the main story's missions AND maxing out the previous tier. SAs are available at the middle of each tier and after completing the main quest.

Status tiers are categorized as follows

| Tier | Events | Levels: |
|------|---|---|
| 1 | Initial event: Starting out (warfare + BBEG intro). Special event 1: 30 Total level. Special event 2: 55 Total level. Warfare 1: Beat Special event 1+2. | 1 – 20 Level per skill. 5 – 100 Total level. Colosseum Easy: 1-20 per skill, 5-40 total level. Colosseum Medium: 1-20 per skill, 40-80 total level. Colosseum Hard: 1-20 per level, 80-90 total level. |
| 2 | Special event 3: 125 Total level. Special event 4: 150 Total level. Warfare 2: Beat Special event 3+4. | 21-40 Level per skill. 101-200 Total Level. Colosseum Easy: 1-40 per skill, 95-140 total level. Colosseum Medium: 1-40 per skill, 140-180 total level. Colosseum Hard: 21-40 per level, 180-190 total level. |
| 3 | Special event 5: 225 Total level. Special event 6: 250 Total level. Warfare 3: Beat Special event 5+6. | 41-60 Level per skill. 201-300 Total Level. Colosseum Easy: 1-60 per skill, 195-240 total level. Colosseum Medium: 1-60 per skill, 240-280 total level. Colosseum Hard: 41-60 per level, 280-290 total level. |
| 4 | Special event 7: 325 Total level. | 61-80 Level per skill. |

| | | |
|---|---|---|
| | Special event 8: 350 Total level. Warfare 4: Beat Special event 7+8. | 301-400 Total Level. Colosseum Easy: 1-80 per skill, 295-340 total level. Colosseum Medium: 1-80 per skill, 340-380 total level. Colosseum Hard: 61-80 per level, 380-390 total level. |
| 5 | Special event 9: 425 Total level. Special event 10: 450 Total level. Warfare 5: Beat Special event 9+10. Final boss: Bossfight Colosseum: 100 level per skill, 500 total level | 81-100 Level per skill. 401-500 Total Level. Colosseum Easy: 1-100 per skill, 395-440 total level. Colosseum Medium: 1-100 per skill, 440-480 total level. Colosseum Hard: 81-100 per level, 480-490 total level. |

Special Abilities

Special abilities are active and can be used when enough force is gathered during fights in the coliseum or in warfare. There are 10 SAs in total, 5 for colosseum and 5 for warfare, while some are more powerful versions of previous ones requiring additional power with one unlocked after reaching the middle point of a tier and one after each boss.

Special attacks are as follows:

| Special Attack | Description | Unlock conditions |
|------------------------------------|--|-------------------|
| Colosseum SA 1: Power strike. | Next auto attack cycle 150% damage. Applies to all attacks in the cycle. Costs 1 Force. | Special event 1. |
| Warfare SA 1: Power strike. | Next AMUL attacks performed deal 150% damage to all enemies. Costs 1 Force. | Special event 2. |
| Colosseum SA 2: Sand Toss. | Stun the enemy for 0.5 to 5 seconds. Higher luck makes it more probable to stun for longer. $TIME = 0.5 + RANGE[0.035 * LCK, 3.5] + 1$ Costs 2 Force. | Special event 3. |
| Warfare SA 2: Sand Toss. | Stun all enemies around you for 0.5 to 5 seconds. Higher luck makes it more probable to stun for longer. $TIME = 0.5 + RANGE[0.035 * LCK, 3.5] + 1$ Costs 2 Force. | Special event 4. |
| Colosseum SA 3: Breath of healing. | Heal HP equal to your SPI level. Costs 3 Force. | Special event 5. |
| Warfare SA 3: Breath of healing. | Heal HP equal to your SPI level. | Special event 6. |

| | | |
|-----------------------------------|--|-------------------|
| | Costs 3 Force. | |
| Colosseum SA 4: Arrow barrage. | Attack the enemy instantly 5 times dealing 200% damage on each hit. Costs 4 Force | Special event 7. |
| Warfare SA 4: Arrow barrage. | Deal 200% damage to all enemies. Costs 4 Force. | Special event 8. |
| Colosseum SA 5: Divine execution. | Attack once dealing 500% damage with 100% critical chance to the nearest target. Costs 5 Force. | Special event 9. |
| Warfare SA 5: Divine execution. | Attack once dealing 500% damage with 100% critical chance to the nearest target. Costs 5 Force. | Special event 10. |

Equipment and items

Equipment Categories

Equipment is classified in 3 categories: weapon, armor and trinket.

Each type of equipment costs different amounts of money and is unlocked based on various conditions such as story progression, levels and minigame progression.

The different types of equipment are as follows:

| Equipment Name | Category | Stats | Unlocking conditions |
|----------------|----------|---------------|--|
| Sword | Weapon | ++DMG | Story bosses (initial at lvl 1) |
| Mail | Armor | ++DEF | Total lvl thresholds (initial at lvl 1) |
| Shield | Trinket | ++DEF -DOD | Sprinting minigame (pass X number of obstacles total) |
| Leather armor | Armor | +DEF +DOD | Sprinting minigame (pass X number of obstacles in one go) |
| Battleaxe | Weapon | +++DMG -ATSPD | Coliseum battles (beat X Hard enemies of each tier) |
| Dagger | Weapon | +DMG +CRID | Coliseum battles (beat X Medium enemies of each tier) |
| Sandals | Trinket | +DOD | Coliseum battles (beat X Easy enemies of each tier) |
| Plate | Armor | +++DEF -DOD | Mashing minigame (Break X |

| | | | |
|----------|---------|---------------------------|--|
| | | | boxes in one go) |
| Robe | Armor | +DOD +POW/S | Meditation minigame (Get X amount of enlightenment in one go) |
| Staff | Weapon | +DMG +POW/S +ACC -CRI% | Meditation minigame (Survive X seconds in one go) |
| Vambrace | Trinket | +DMG +CRI% -DEF | Mashing minigame (break X amount of barricades in one go) |
| Charm | Trinket | +CRI% | Gambling Minigame (Earn X amount of money total) |

Minigames

Coliseum minigame – Cash, HP

A 1v1 automated fight. The player cannot quit from this fight.

The player can select the enemy's difficulty level and tier which determine their base stats, weapons and armor.

An Easy opponent will have a randomized total level of up to 40 levels on the given tier, a Medium up to 80 and a Hard will have between 80-90 levels on the selected tier (and a maximized previous tier) Enemies will also wield a random weapon and armor. Easy will wear armor of the lower tier, Medium and hard of the same tier.

The base price to join a match is determined by the tier. The payout reward is increased based on the difficulty.

1:1.2 for Easy 1:1.5 for Medium and 1:2 for Hard.

For each match won, the player gains HP exp. An easy match will give half a level, a medium 1 level and a hard match 2 levels.

Mashing mining minigame - STR

The player breaks rocks as fast as possible. The player is awarded with STR exp for each rock broken, which scales with the rock's size.

Rocks appear in front of the character and the player has to mash as fast as possible to break them. Each rock requires a randomized amount of hits to break. Each rock also has a chance to have a gold nugget inside it, which awards the player with gold, with the chance of finding a nugget being a standard 5% regardless of rock size.

While breaking rocks the character has a stamina bar. When the stamina bar is full and the player clicks for the first time it starts depleting and the player mashes as the bar goes down. When the bar is

depleted, the character is briefly exhausted and they must stop to catch their breath. Clicking while the bar is recharging penalizes the player by resetting the recharge time.

The player's VIT determines the time allowed to play the game, starting from 30 seconds and increasing up to 1:30 minutes. The player's SPI determines the time the player has to mash from 5 seconds up to 20 seconds and reduces the recharge time from 3 seconds to 1 second. The player's LCK stat increases the gold gained per nugget obtained by an additional 1% per LCK level up to a 100% bonus.

Top-down shooter - SPD

The player has to defend a castle from enemy attacks. The player controls an immobile archer on top of the castle while enemies come from different paths. Increases SPD based on the final score.

Each wave has a specific "weight" of enemies to spawn and the spawned enemies are random on every wave. Land enemies only go on land paths, boats go on water paths.

The enemies include:

- Normal: med speed, health 1x weight, 1 life
- Fast: High speed, low health 2x weight, 1 life
- Heavy: Low speed, high health 4x weight, 2 lives
- Boss: Low speed, V.high health 8x weight, 5 lives
- Small boat: med speed, low health 2x weight, 2 lives
- Big boat: Low speed, med health, 4 lives

As the wave number increases, so does the weight of spawned enemies spawning more and/or harder enemies. The player receives a score based on the maximum wave reached.

The player's STR stat determines the firing speed of the archer and the player's LCK stat gives a chance for a "Villager ambush" on an enemy that passes through, reducing or omitting the lives lost when an enemy passes through. The firing speed starts at 1.5 seconds between each shot and is reduced linearly by 0.01 second per level up to 0.5 seconds at maximum STR. Villager ambush chance increases by 0.1% per level for a maximum of 10% plus an additional 2.5% for every status tier completed for an additional 12.5%.

The player's lives increase based on their status tier, starting from 10 and increasing by 5 for each additional tier. The player's status tier also unlocks additional difficulty options where for each difficulty increase above the first all enemy speed increases by 10% but the reward score increases by 30%.

Meditation minigame - SPI

You have to press well-timed quick-time events to not break your concentration for as long as possible. Increases SPI.

Distractions or enlightenments will appear from the 4 corners of the screen and the player has to time and block or gather them when they are over an indicator.

Distractions can be blocked by pressing the appropriate arrow key. Enlightenments can be gathered by pressing the appropriate WASD key.

Failing to block a distraction will reduce the player's health. Falsely blocking will also reduce the player's health. The player can also quit at any time (Q) Game over is when the player reaches 1 HP.

Gathered enlightenments give bonus XP while non-gathered simply vanish. XP is gained every second spend meditating, increasing the xp/sec as the speed increases.

More distractions/sec will appear over time and the speed they move towards the player will also increase over time.

The player's VIT determines their health in the minigame the same way it does outside of it.

Gambling Minigame - LCK

This is a dice roll prediction minigame. The player can play as many rounds as they like.

You pay money every time you play and earn LCK xp and money, some LCK xp is awarded even on a loss.

1D6 is thrown. You have the following choices:

Lose XP -> 1 xp

Odds | Evens -> 2x payout + 2 LCK XP

1-6 | 2-5 | 3-4 -> 3.5x payout + 4 LCK XP

1 | 2 | 3 | 4 | 5 | 6 -> 7x payout + 8 LCK XP

In addition, you can increase the betting money:

10 gp -> base rate

100gp -> 2x non-loss xp

1.000gp -> 4x non-loss xp

10.000gp -> 8x non-loss xp

Special training – Special abilities.

Special training is tied to story-based events. Each story event is a sequence of instanced events which include dialogue, popups and completing the minigames with special winning conditions (e.g. reaching a certain score). At the end of a special training the player unlocks a special ability.

There are two special training events available for each level tier, one when reaching 25% of the tier's total level and one for reaching 50%. The first special event unlocks an ability for the colosseum fights, the second for warfare.

Warfare minigame

Warfare events happen after the player completes both Special trainings for each tier.

Warfare minigames are side-scrolling beat-em-ups. The same stats used in the colosseum are used as combat stats in this mode.

The player moves around the screen using the arrow keys, the space bar to attack, control to block (if using a shield) and the Z,X,C,V,B buttons to activate special abilities.

In warfare missions the player must fight enemies until a secondary objective is met. The secondary objectives per warfare mission are as follows:

| Warfare mission | Description and objective. |
|-----------------|--|
| 1 | Kill X number of enemies until a bar fills. |
| 2 | Protect villagers. There are 1-3 villagers in the screen. The villagers must survive for 5 minutes. |
| 3 | Survive for 5 minutes then beat a boss. |
| 4 | Use a siege machine to break a gate. The player must kill incoming enemies and then operate a siege machine to damage a gate 5 times to win. |
| 5 | Survive for 10 minutes, then kill the BBEG (he then appears in the colosseum for a final match.) |

Town of Mainia

The town serves as the central hub of the player. The town contains options for going to various spots for performing various actions including:

Store: Buy and sell equipment.

Arena: participate in the Colosseum.

Mine/ Mountain: play the Mashing/Mining minigame.

Gate: play the Top-Down shooter defense minigame.

River / Waterfall/ Mountain Peak/ Church: play the Meditation minigame.

Tavern/ Casino/ Back Alley: play the Gambling minigame.

Tavern/ Inn/ Camp outside town: participate in Special training and Warfare events when available.

Combat Gameplay

Colosseum fights

Colosseum fights use an active time automatic battle system. (see: <https://www.youtube.com/watch?v=C5bxHV65SG0>)

The combat screen follows the visuals of 2D turn-based RPGs similar to Pokémon as seen in the image:



In our case the screen is split as follows:

| | |
|---------------------|----------------|
| Enemy Info | Enemy Portrait |
| Player Portrait | Player Info |
| Special Attacks 1-5 | |

The portraits show the character models or 2D portraits of the characters. Player portraits face to the right, enemy portraits to the left. Each attack/action performed in combat shows a visual effect animation over a portrait as well as a numerical value detailing the effect including:

- Red text: damage taken
- Orange text: critical damage taken
- Green text: Healing done
- Blue/Grey text: Dodge, block, stun

The Special attacks bar contains 5 buttons, one for activating each Special attack. Special attacks are identified using unique button visuals. At the corner of each Special attack is a numerical value depicting its cost or a lock icon depicting it is not available. The special attacks are shown in bright colors if available, darkened colors if unavailable and in black and white if locked. In addition, to the right of the Special attack buttons are 2 additional buttons with info on the player's stats and Special attack descriptions. Pressing these 2 buttons show a popup over the battle screen and pauses the combat until closed.

The Player Info panels show a list of bars including:

- Red Health bar: Character health. Starts from full and when emptied the character loses.
- Yellow bar: Force meter. Fills over time and is split into 5 intervals from 0 to 5 Force.
- Blue bar: Attack charge bar. Fills over time and when filled the character attacks and the bar is reset.

Below the bars are the effect indicators. These are a vertical set of images depicting various temporary effects on the characters. These include:

- SA1: Empowered next attack
- Stunned

During the fight, the attack charge bar and the force meter charge over time. The attack charge bar fills over *ATKSPD* seconds and then the character performs an auto attack cycle. The charge bar then resets to zero and begins refilling. The force meter fills based on the character's *POW/S* per second up to a maximum value of *POW*.

On each attack cycle the character performs a number of attacks according to their *AMUL* value.

On each attack, the character makes a hit check as follows:

Check (0-1) > En DOD – ACC

On a successful hit, the player rolls a second check to determine a critical:

Check (0-1) < CRI% -> Critical, else normal attack

A normal attack deals damage based on the following formula

HP dam = DAM – DEF

while on a critical the formula changes to:

*HP dam = DAM * CRID – DEF*

SA are activated immediately performing their effect. In the case of power strike, the player's DAM value is increased and after their next attack cycle is performed it is reset.

Warfare

The warfare screen is similar to a Beat em up. The player character moves in four directions using the WASD or arrow keys. When moving left or right, the character faces that direction. The player's attacks affect all enemies in front of their character at a set cube area equal to 1,5 x 1,5 times the character's width.

The player attacks using the Space bar and activates SA using the 1, 2, 3, 4, 5 or z, x, c, v, b keys accordingly.

The player's info bars (health, attack, force) are displayed at the top left corner of the screen. Damage numbers and enemy health bars appear over every character's head. The player's win condition is shown at the top right of the screen. If a boss is spawned, the boss's health bar appears at the top center of the screen.

Combat calculations are performed similar to the Colosseum unless stated otherwise.

The attack bar in this mode works as a stamina meter. The AMUL value determines how many attacks can be performed with a full attack bar with each individual attack removing 1/AMUL amount. The attack bar fills constantly over ATSPD seconds.

The Power strike ability increases the player's DAM and has a number of charges equal to AMUL. One charge is expended for each attack performed. When all charges are expended the bonus damage is reverted.

Town and Game Modes

Game Modes

Demo: Playing each minigame once gives the maximum possible Exp regardless of score. Special events are always completed regardless of the win conditions. Warfare damage is reduced to 10% the normal amount (min 1).

Standard: Players gain normal Exp after each mission. Special events and Warfare missions require fulfilling the win conditions. Warfare damage is normally calculated.

Hardcore: Losing during the Coliseum minigame, Special Event or Warfare is a permadeath.