**MAIN STATS** (IN ORDER):

* STA – Stamina
* STR – Strength
* AGI – Agility
* DEF – Defense
* MIN – Mind
* INT – Intellect
* EVA – Evasion
* ACC – Accuracy

Character\_Race\_Data & Character\_Class\_Data:

* The stats here is a 8 bytes, each byte represents a stat. Therefore, the max amount for each stat is 255,

Example,

0011 0101 0111 0111 0111 0101 0101 0101 0011 0101 0111 0111 0111 0101 0101 0101

STA = 53 STR = 119 AGI = 117 DEF = 85 MIN = 53 INT = 119 EVA = 117 ACC = 85

* Depending on the Race and Class chosen that will determine the base stats of a character. The stats corresponding to your characters race and class will be added to create the base stats of a player’s character

Weapon and Armor:

* Stats works the same as Character\_Race\_Data & Character\_Class\_Data.
* Stats\_Effect is 1 byte, each bit correspond to each of the stat, so if 1 then you add the amount else if 0 then you subtract the amount. This will give the effect of sacrificing certain stats for others.

NPC and Enemies:

* They don’t have weapons nor armor (other than graphically), but they do have abilities. Therefore, the stats on here will be their complete stats. (All their stats will be determined just from this.

**Calculating A Character’s Stats**

1. Read the stats for the character’s race, read byte by byte. Each byte corresponds to a stat, in the order given above. Calculate the value of the byte, and store it in an array that holds each stat separately.
2. Do the same for the stats of the character’s class, expect you add them up to each corresponding stat in the array.
3. After Collecting all the base stats, you multiply each stat by (1 + (character’s level / max level)).
4. Read the stats of each weapon and armor equipped on the character. Then you check the Stats\_Effect, which is 1 byte. Each bit in the Stats\_Effect bit corresponds to a stat, if the corresponding bit is 0 then subtract the amount of the stat given by the armor or weapon. Else if the bit is 1 then you add.

**Calculating an Enemy and NPC Stats**

1. Read the stats for the character’s race, read byte by byte. Each byte corresponds to a stat, in the order given above. Calculate the value of the byte, and store it in an array that holds each stat separately.
2. Do the same for the stats of the character’s class, expect you add them up to each corresponding stat in the array.

**Effect\_Remove or Effect\_Apply**, 1 Byte, each bit represents an effect it heals, in the order:

* + Poisoned
  + Slow
  + Blind
  + Paralyzed
  + Sapped
  + Frozen
  + Sleep
  + Confused

Item:

* On item table, we have HP\_MP, 2 Bytes. First byte is for amount of HP healed and Second byte is for amount of MP restored.

Ability:

* Effect\_Apply and Effect\_Remove works the same as above, plus the ability has a type, and a power level of one digit between 1-9;

**Values Calculated by Stats**

* Physical Attack – This is a regular attack using a weapon. This is calculated by using the STR stat. ACC is also used to determine if the attack is critical.
* Range Attack- This is an attack using a range weapon. This is calculated by using the AGI stat. ACC is also used to determine if the attack is critical.
* Physical Block – This is the amount the defending character blocks from an enemies Physical Attack. This is calculated by using the DEF.
* Range Block – This is the amount the defending character blocks from an enemies Range Attack. This is calculated by using the DEF and EVA.
* Miss Probability – This is the probability of a character dodging any attack and avoiding any damage. This is calculated using EVA.
* Hit Probability – This is the probability of a character landing an attack. This is calculated using ACC.
* Magical Attack – This is the amount of damage caused by a magical type ability. It uses MIN, ability power level, and ability element.
* Magical Heal - This is the amount of healing caused by a magical type ability. It uses INT, ability power level, and ability element.
* Magical Defense – This is the amount of damage blocked. This is calculated by using both INT and MIN.
* Health Points – The amount of health points. It is calculated by using the STA stat.
* Magic Points – The amount of magic points. It is calculated by using the both MIN and INT.