

NANDOSOFT

XNA RPG – Battle System

Initial Design Concept

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1/16/2009

DISCLAIMER: Images are for reference only and not final art assets for the game.

VERSION HISTORY

Date	Version	Authors	Details
11-Jan-09	1.0	Armando Alva	Initial Draft.

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OVERVIEW

The game combat system will be turn based; at the start of the combat each combatant will resolve its **INITIATIVE**.

Once the initiative values have been calculated each combatant will take place in the combat queue in order from the highest to the lowest initiative value calculated, note that monsters of similar type are not grouped into a single initiative slot but they are given id's that range from A to Z.



If the current turn corresponds to a **PLAYER CONTROLLED CHARACTER** the command menu will appear.



The menu will show **all the actions that the current character can perform**, plus the window will also show some vital information about the character **like current hit point (HP)** and any status ailment that the character could have at that moment.

Once the player has selected the desired command, a sub window will pop up in the center of the screen showing more detailed information about the selected command, for example

if the command selected is the attack command, the sub window will show all of the different types of attacks that the selected character has, if the command selected is the item command, the sub window will show all of the combat-usable items that **the entire party** has at its disposal.



Navigation of the sub window can be done with the directional buttons (UP / DOWN) but if there are many items listed the LB and RB buttons will flip pages up and down respectively.

Pressing the A button will launch the selected action/item, usually after selection an action the sub window will close and a **cursor** will appear on the battlefield expecting a **target** to perform the **selected action**.

Besides performing a combat action a combatant will also be able to **perform a move action in a single turn**, movement range is calculated based on vital stats, this way some characters could move a lot a round the battlefield (speedy type) while others will barely move (slow but powerful type), the move command can be performed before or after an attack command.

Items and Block commands count as an attack command.

On the Main Command button pressing the B button will position the cursor on the Defend command. The defend command does nothing but raises the defenses of the character (this will be like selecting Pass but it can be somewhat more useful than just doing nothing).

The combat ends when:

- All the Player Characters (PC's) die
- All the Enemies die
- The current quest objective is accomplished (special cases)

Currently there is no way to retreat from a battle, battles will always be deadly.

CHARACTER VITAL ATTRIBUTES

Every single character that is able to do combat will have these sets of attributes, whether it is a PC an NPC or a MONSTER.

Name	Description
Strength	Determines the damage of melee attacks
Agility	Determines the hit probability of melee and ranged hits, determines initiative. Factors in the speed of the actions. Determines the evasion. (only if no heavy armor is equipped)
Constitution	Determines the amount of Hit Points and the resistance to poison type effects. Determines the resilience to subdual damage
Intelligence	Determines the damage of magical attacks. Determines the amount of Mana Points (MP)
Wisdom	Determines the resistance to magical attacks and magic debuffs. Determines the ability to detect traps (normal / magical) illusions, or curses
Charisma	Helps with NPC dialogue. Helps when shopping or selling items.
Luck	Factors in the calculation of critical hits (melee/magical)

MELEE ATTACKS: RESOLUTION

Requirements: Both combatants within melee range. No special weapon required (unarmed is considered like the character is equipped with fists as a weapon).

Note:

1. A magical enhancement is any effect (positive or negative) that comes from a source different than the vital statistics (magic spell, magic armor, magic weapon, magic item).
2. The word dice equals to the chosen dice value, as of this version the dice is 1d20 (one 20 sided dice)
3. Level is the reference to the actual character level value (level 1 == 1)
4. LUCK-> indicates that the amount described between parenthesis is only applied if the LUCK calculation has succeeded
5. ATTACKER is always a reference to the character dealing the melee attack
6. DEFENDER is always a reference to the character receiving the melee attack

Resolution to a common attack command:

1.	ATTACKER = Dexterity + Magical Enhancement + Dice + LEVEL DEFENDER = Dexterity + Magical Enhancement + Dice + LEVEL IF ATTACKER < DEFENDER THEN EXIT ELSE GOTO 2.
2.	DAMAGE = (Strength + Weapon Dmg + Magical Enhancement + Dice + LEVEL) + LUCK->(*2) REDUCTION = Armor + Shield + Magical Enhancement TOTAL_DAMAGE = DAMAGE - REDUCTION
3.	If ATTACKER - Attack type == DEFENDER - Resistance Type TOTAL_DAMAGE = TOTAL_DAMAGE * -1
4.	DEFENDER HP = TOTAL_DAMAGE IF DEFENDER TAKES NO DAMAGE SKIP #5.
5.	Apply ATTACKER ON_HIT Magical Effects Apply DEFENDER ON_DAMAGE Magical Effects

RANGED ATTACKS: RESOLUTION

Requirements: DEFENDER within ATTACKER ranged weapon's range. ATTACKER needs a ranged weapon.

Note:

1. A magical enhancement is any effect (positive or negative) that comes from a source different than the vital statistics (magic spell, magic armor, magic weapon, magic item).
2. The word dice equals to the chosen dice value, as of this version the dice is 1d20 (one 20 sided dice)
3. Level is the reference to the actual character level value (ex. level 1 == 1)
4. LUCK-> indicates that the amount described between parenthesis is only applied if the LUCK calculation has succeeded
5. ATTACKER is always a reference to the character dealing the melee attack
6. DEFENDER is always a reference to the character receiving the melee attack

Resolution to a common attack command:

1.	<p>ATTACKER = Dexterity + Magical Enhancement + Dice + LEVEL DEFENDER = Dexterity + Magical Enhancement + Dice + LEVEL</p> <p>IF ATTACKER < DEFENDER THEN EXIT ELSE GOTO 2.</p>
2.	<p>DAMAGE = (Weapon Dmg + Magical Enhancement + Dice + LEVEL) + LUCK->(*2)</p> <p>REDUCTION = Armor + Shield + Magical Enhancement</p> <p>TOTAL_DAMAGE = DAMAGE - REDUCTION</p>
3.	<p>If ATTACKER - Attack type == DEFENDER - Resistance Type TOTAL_DAMAGE = TOTAL_DAMAGE * -1</p>
4.	<p>DEFENDER HP = TOTAL_DAMAGE IF DEFENDER TAKES NO DAMAGE SKIP #5.</p>
5.	<p>Apply ATTACKER ON_HIT Magical Effects Apply DEFENDER ON_DAMAGE Magical Effects</p>

MAGICAL ATTACKS: RESOLUTION

Requirements: DEFENDER within ATTACKER magic attack range.

Note:

1. A magical enhancement is any effect (positive or negative) that comes from a source different than the vital statistics (magic spell, magic armor, magic weapon, magic item).
2. The word dice equals to the chosen dice value, as of this version the dice is 1d20 (one 20 sided dice)
3. Level is the reference to the actual character level value (ex. level 1 == 1)
4. LUCK-> indicates that the amount described between parenthesis is only applied if the LUCK calculation has succeeded
5. ATTACKER is always a reference to the character dealing the melee attack
6. DEFENDER is always a reference to the character receiving the melee attack
7. SPELL_RESISTED is treated the same as a MISS melee attack

Resolution to a common attack command:

1.	ATTACKER = SPELL_LVL + Magical Enhancement + Dice + LEVEL DEFENDER = WISDOM + Magical Enhancement + Dice + LEVEL IF ATTACKER < DEFENDER THEN SPELL_RESISTED = TRUE
2.	DAMAGE = (SPELL_DMG + Magical Enhancement + Dice) + LUCK->(*2) REDUCTION = Wisdom + Magical Enhancement TOTAL_DAMAGE = DAMAGE - REDUCTION
3.	If ATTACKER - Spell type == DEFENDER - Resistance Type TOTAL_DAMAGE = TOTAL_DAMAGE * -1
4.	DEFENDER_HP = TOTAL_DAMAGE IF DEFENDER TAKES NO DAMAGE SKIP #5.
5.	Apply ATTACKER_ON_HIT Magical Effects Apply DEFENDER_ON_DAMAGE Magical Effects

TURN RESOLUTION

At the end of the turn (That is when the character has finished its attack and/or its movement action), a new initiative value will be calculated. The calculation depends on what actions the character performed during its turn.

New Initiative Value = $\text{Min}(1, \text{ActionDelay} - \text{Agility})$

If a character has chosen to cast a spell, the spell will not launch immediately, spells need a casting time so the character will be positioned on the initiative the casting time for the selected spell. If the caster is hit during "casting time" its initiative will be incremented delaying its casting time even more.