Make an RPG

We were asked to make a simple damage calculation and leveling system for an RPG, BattleQuest IV.

We need to implement the following.

* Hero Class with Hp, Armor, Level, Gold Carried and Attack Power
  + Methods: Attack, DropGold and Level up, UsePotion
* Enemy class with Hp, Armor, Level, Attack Power and Gold Dropped on defeat
  + Methods: Attack, DropGold

Both need an Attack method which will calculate the damage done.

void attack(Enemy enemy) for the hero class & void attack(Hero hero) for the enemy

Where L is the Level of the Attacker, P is the Attack Power (of attacker) And A is Armor Level of the defender (note Armor is a percent reduction. Will be stored as .5 or 50% etc.)

The enemy will have a simple gold dropped calculation when its HP hits zero that will complete at the end of the attack

The level of the enemy divided by 3 times a random number between 10 and 25

Should the hero fall in battle, it will cost them gold.

We will also implement a simple Level up system that requires a static 500 gold to Level Up the hero’s HP by 25 and attack power by 1 and obviously their level by 1.