**abstract class: Hero**

# Name: string
# Level: int
# HeroAttributes: StateAttributes
# Equipment: Item[]
# ValidWeaponTypes: WeaponTypes[]
# ValidArmorTypes: ArmorTypes[]

Constructor(string name)
abstract Levelup()
virtual EquipArmor()
virtual EquipWeapon()
abstract Damage()
+ TotalAttributes()
+ Display()

**+ : Public,    - : private    # : protected**

**class: Mage**

**class: Ranger**

**class: Rogue**

**class: Warrior**

**Class: StateAttributes**

- Strength: int
- Dexterity: int
- Intelligence: int

- Increment()

**abstract class: Item**

# Name: string
# RequiredLevel: int
# Slot: SlotTypes

**class: Armor**

- ArmorType: ArmorTypes
- ArmorAttribute: StateAttributes

**class: Weapon**

- Damage: int
- Type: WeaponTypes

**<<enumeration>> SlotTypes**

Weapon
Head
Body
Legs

**<<enumeration>> ArmorTypes**

Cloth
Leather
Mail
Plate

**<<enumeration>> WeaponTypes**

Axe
Bow
Dagger
Hammer
Staff
Sword
Wand

**Leveling Attributes:**

| X=level | Strength | Dexterity | Inteligent |
|---------|----------|-----------|------------|
| Mage | x | x | 5x+3 |
| Ranger | x | 5x+2 | x |
| Rogue | x+1 | 4x+2 | x |
| Warrior | 3x+2 | 2x | x |

**Equipment: <slot,item>          Initialize: <slot,NULL>**

| Allowed | Weapons | Armors |
|---------|---------|--------|
| Mage | Staff, wand | Cloth |
| Ranger | Bow | Leather, mail |
| Rogue | Dagger, sword | Leather, mail |
| Warrior | Axe, hammer, sword | Mail, plate |

**Invalid Exeption:** Equip Item not allowed or Level < RequiredLevel

-> InvalidWeaponException or InvalidArmorException

**TotalAttributies**

Total = LevelAttributes + (sum of ArmorAttribute for all Armor Equipment)

**Heroes damage**

Damage = max(1,**WeaponDamage**) * (1+**DamageAttribute**/100)

**DamageAttribute**

**Warrior**: Strength    **Mage**: Intelligence    **Ranger**: Dexterity    **Rogue**: Dexterity

**Hero Display** (string builder)

Name, Class, Level, Total Strength, Total Dexterity, Total Intelligence, Damage