Garrett O’Shaughnessy

Prof. Tucker

Final Project UML

|  |
| --- |
| Player |
| - string name  - int attack  - int weaponDamage  - int defense  - int hp  - int level  - double xp  - double levelxp  - int coins  - vector<Item> backpack  - vector<Item> equipment |
| + Player()  + Player(string name)  + string GetName()  + void SetName(string name)  + void AddXp(double xp)  + double GetLevelXp()  + void AddLevelXp()  + int GetLevel()  + void AddLevel(int num)  + void Combat(Monster m)  + void Trade(Trader t)  + void Talk(Guide g)  + void Equip(Item i)  + void Unequip(Item i)  + void DrinkPotion(Potion p)  + void AddToBackpack(Item i)  + void CheckBackpack()  + int GetAttack()  + void SetAttack(int att)  + int GetWeaponDamage()  + void SetWeaponDamage(int dmg)  + int GetDefense()  + void SetDefense(int def)  + int GetHp()  + void SetHp(int h)  + int GetCoins()  + void SetCoins(int c) |

|  |
| --- |
| Guide |
| - string name |
| + Guide()  + Guide(string name)  + string GetName()  + void SetName()  + void GiveAdvice()  + void GiveDirections() |

|  |
| --- |
| Trader |
| - string name  - int coins  - virtual char specialty  - virtual vector<Item> inventory  - double priceMultiplier |
| + Trader()  + Trader(string name)  + Trader(string name, char specialty)  + string GetName()  + void SetName(string n)  + int GetCoins()  + void SetCoins(int c)  + char GetSpecialty()  + void SetSpecialty(char spec)  + void ListInventory()  + void AddToInventory(Item stock)  + double GetPriceMultiplier()  + void SetPriceMultiplier() |

|  |
| --- |
| WeaponSmith (IS-A) : Trader |
| - char specialty = ‘W’  - vector<Weapon> inventory |
| + WeaponSmith()  + WeaponSmith(string name) |

|  |
| --- |
| ArmorSmith (IS-A) : Trader |
| - char specialty = ‘A’  - vector<Armor> inventory |
| + ArmorSmith()  + ArmorSmith(string name) |

|  |
| --- |
| Cleric (IS-A) : Trader |
| - char specialty = ‘C’  - vector<Potion> inventory |
| + Cleric()  + Cleric(string name) |

|  |
| --- |
| Ally |
| - string name  - virtual char specialty  - int attack  - int weaponDamage  - int defense  - int hp  - int level  - vector<Item> equipment |
| + Ally()  + Ally(string name)  + string GetName()  + void SetName(string name)  + char GetSpecialty  + void SetSpecialty(char c)  + int GetLevel()  + void AddLevel(int num)  + void Combat(Monster m)  + void Talk()  + void Equip(Item i)  + void Unequip(Item i)  + int GetAttack()  + void SetAttack(int att)  + int GetWeaponDamage()  + void SetWeaponDamage(int dmg)  + int GetDefense()  + int SetDefense(int def)  + int GetHp()  + void SetHp(int h) |

|  |
| --- |
| Elf (IS-A) : Ally |
| - char specialty = ‘E’  - double attackMultiplier |
| + Elf()  + Elf(string name)  + double GetAttackMultiplier()  + void SetAttackMultiplier(double mult) |

|  |
| --- |
| Dwarf (IS-A) : Ally |
| - char specialty = ‘D’  - double DefenseMultiplier |
| + Dwarf()  + Dwarf(string name)  + double GetDefenseMultiplier()  + void SetDefenceMultiplier(double mult) |

|  |
| --- |
| Man (IS-A) : Ally |
| - char specialty = ‘M’  - double hpMultiplier |
| + Man()  + Man(string name)  + double GetHpMultiplier()  + void SetHpMultiplier(double mult) |

|  |
| --- |
| Monster |
| - virtual char specialty  - int attack  - int weaponDamage  - int defense  - int hp  - int level |
| + Monster()  + Monster(int level)  + int GetAttack()  + void SetAttack(int att)  + int GetWeaponDamage()  + void SetWeaponDamage(int dmg)  + int GetDefense()  + void SetDefense()  + int GetHp()  + void SetHp(int h)  + int GetLevel()  + void SetLevel(int lvl) |

|  |
| --- |
| Boss (IS-A) : Monster |
| - char specialty = ‘B’  - double attackMultiplier  - double defenseMultiplier  - double hpMultiplier |
| + Boss()  + Boss(int level)  + double GetAttackMultiplier()  + void SetAttackMultiplier()  + double GetDefenseMultiplier()  + void SetDefenseMultiplier(double mult)  + double GetHpMultiplier()  + void SetHpMultiplier() |

|  |
| --- |
| Goblin (IS-A) : Monster |
| - char specialty = ‘G’  - double attackMultiplier |
| + Goblin()  + Goblin(int level)  + double GetAttackMultiplier  + void SetAttackMultiplier(double att) |

|  |
| --- |
| Ork (IS-A) : Monster |
| - char specialty = ‘O’  - double defenseMultiplier |
| + Ork()  + Ork(int level)  + double GetDefenseMultiplier()  + void SetDefenseMultiplier(double def) |

|  |
| --- |
| Troll (IS-A) Monster |
| - char specialty = ‘T’  - double hpMultiplier |
| + Troll()  + Troll(int level)  + double GetHpMultiplier()  + void SetHpMultiplier(double h) |

|  |
| --- |
| CombatClass |
| - int damage  - char type  - virtual char class |
| + CombatClass()  + int GetDamage()  + void SetDamage(int dmg)  + char GetType()  + void SetType(char t)  + char GetClass()  + void SetClass(char c)  + int GetLevel()  + void SetLevel(int lvl) |

|  |
| --- |
| Warrior (IS-A) : CombatClass |
| - char type = ‘W’ |
| + Warrior() |

|  |
| --- |
| Archer (IS-A) : CombatClass |
| - char type = ‘A’ |
| + Archer() |

|  |
| --- |
| Wizard (IS-A) : CombatClass |
| - char type = ‘W’ |
| + Wizard() |

|  |
| --- |
| Item |
| - string name  - float price |
| + Item()  + Item(Name)  + string GetName()  + void SetName()  + float GetPrice()  + void SetPrice() |

|  |
| --- |
| Weapon (IS-A) : Item |
| - int damage |
| + Weapon()  + Weapon(string name)  + Weapon(string name, float price)  + int GetDamage()  + void SetDamage() |

|  |
| --- |
| Armor (IS-A) : Item |
| - int defense |
| + Armor()  + Armor(int defense)  + int GetDefense()  + void SetDefense() |

|  |
| --- |
| Potion (IS-A) : Item |
| - int quantity  - double effectMultiplier |
| + Potion()  + void ActivateEffect()  + double GetEffectMultiplier() |

|  |
| --- |
| HealingPotion (IS-A) : Potion |
| - int healing |
| + HealingPotion()  + int GetHealing()  + void SetHealing() |

|  |
| --- |
| XpBoostPotion (IS-A) : Potion |
| - int xpBoost |
| + XpBoostPotion()  + int GetXpBoost()  + void SetXpBoost() |