

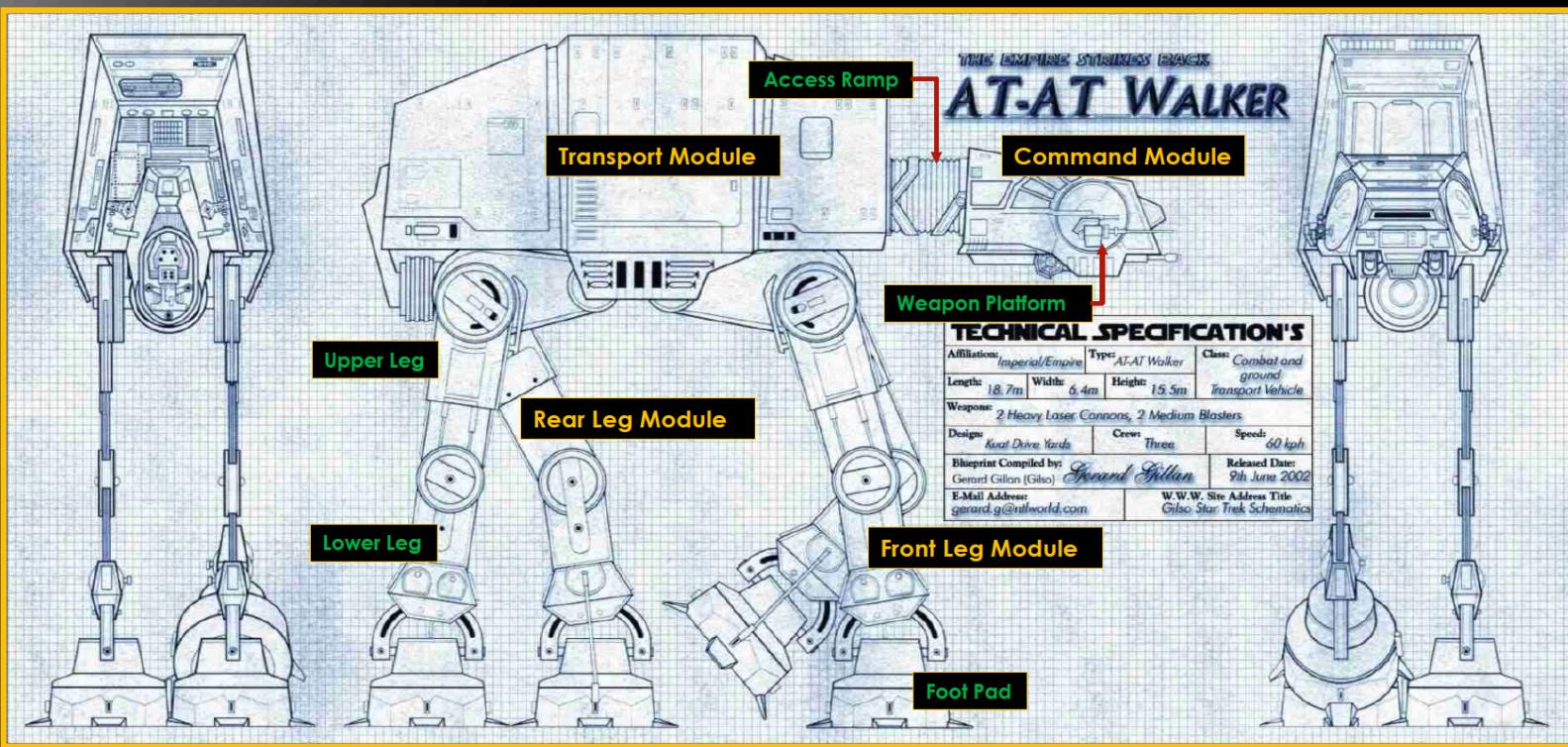
Imperial Walker



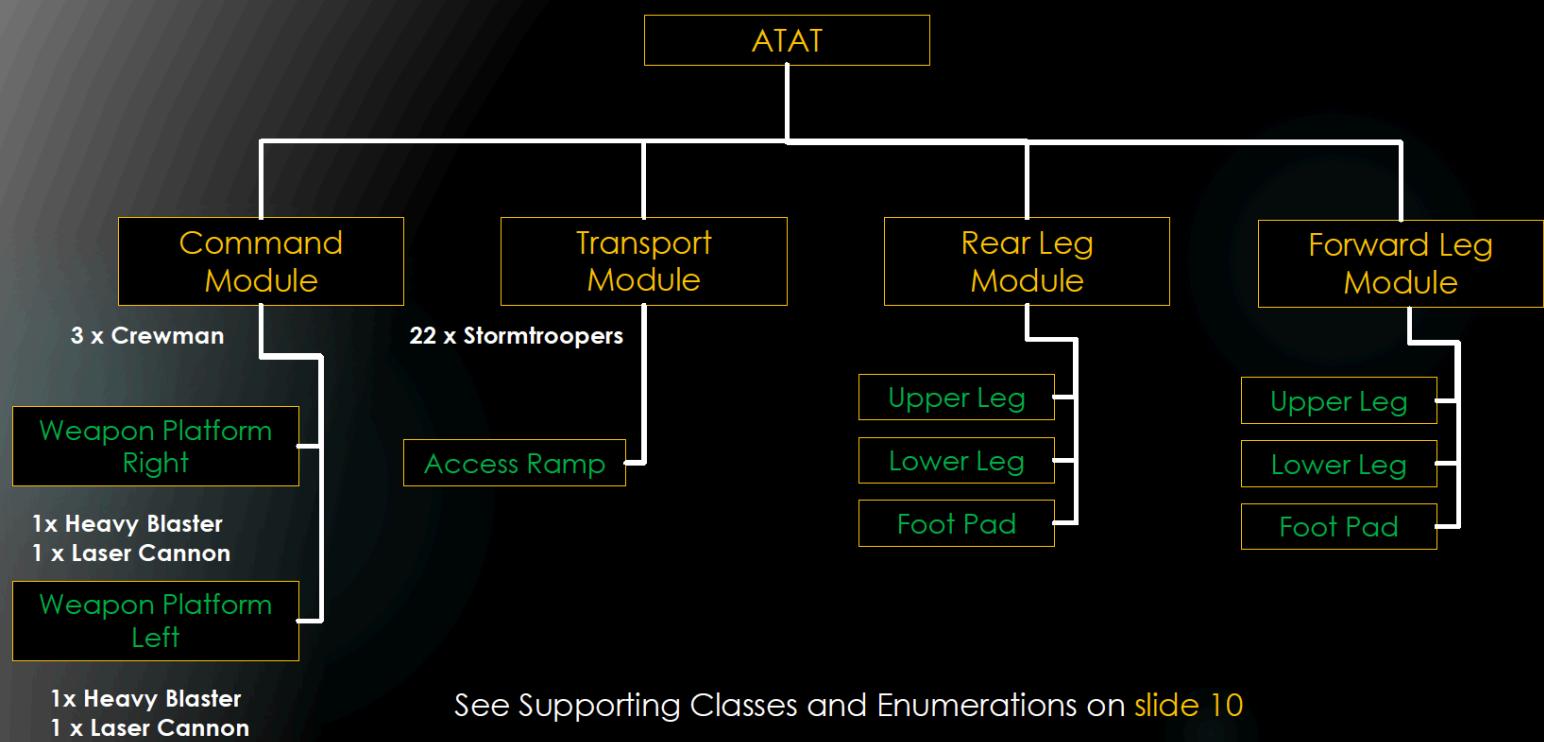
AT-AT WALKER (ALL TERRAIN ARMORED TRANSPORT)

The All-Terrain Armored Transport, or AT-AT walker, is a four-legged transport and combat vehicle used by the Imperial ground forces. Standing over 20 meters tall with blast-impervious armor plating, these massive constructs are used as much for psychological effect as they are for tactical advantage.

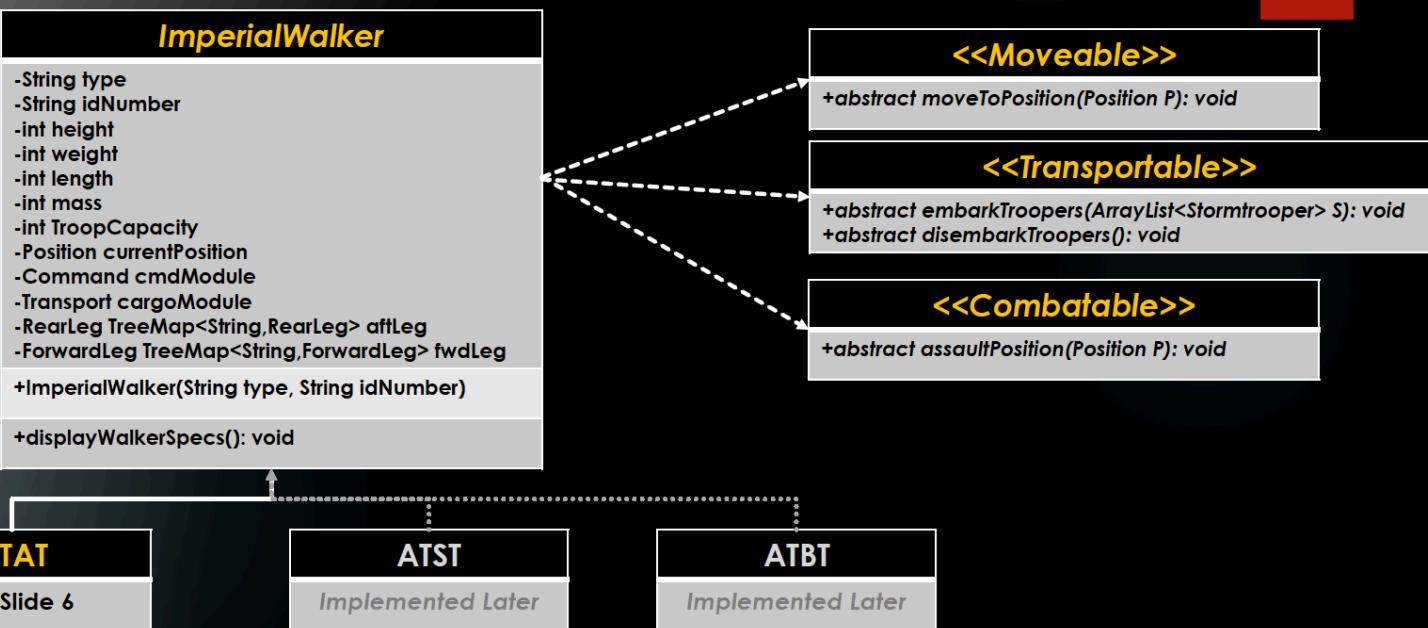
ATAT Imperial Walker



ATAT Model



ImperialWalker Class and Subclasses

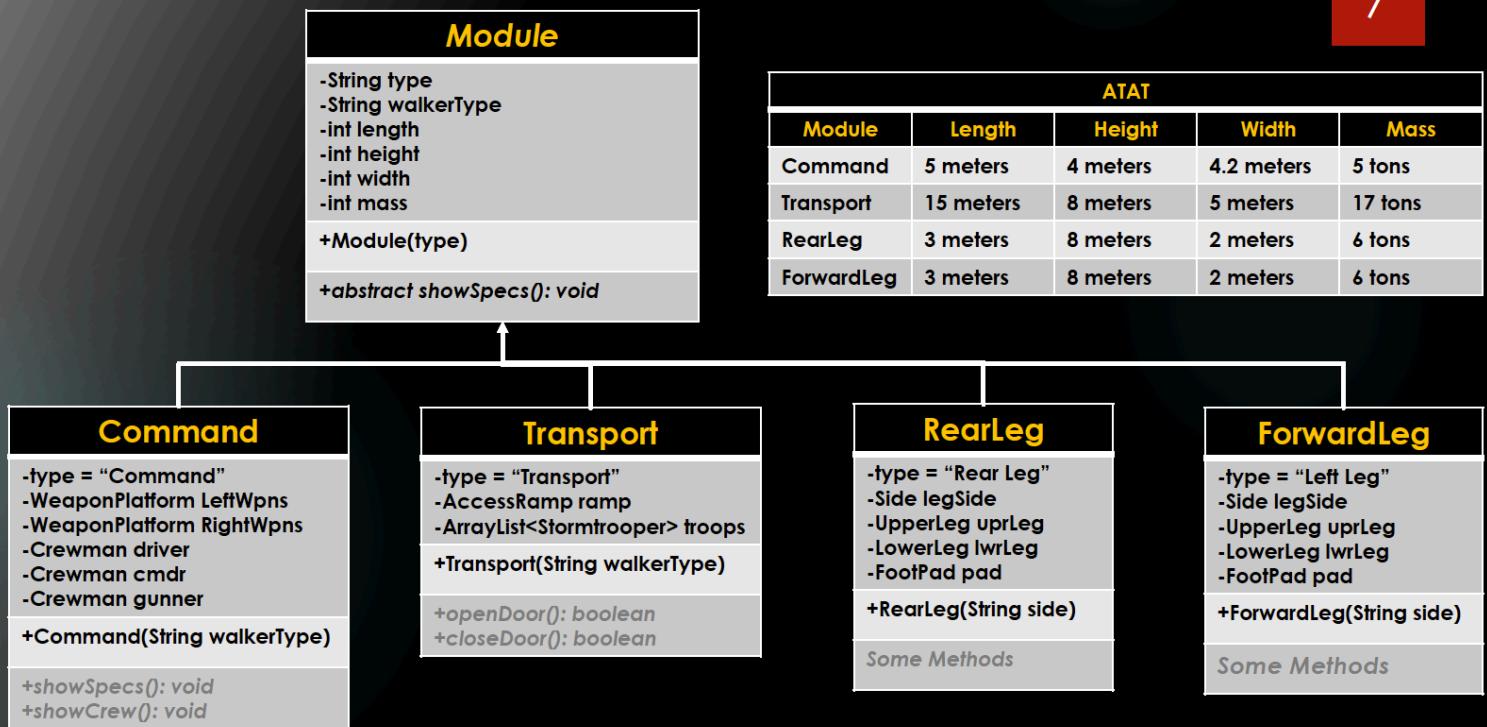


ATAT Class

ATAT
-String ATATBattleCode = "Heavy_AT"
+ATAT(String idNumber)
+moveToPosition(Position P): void
+embarkTroopers(ArrayList<Stormtrooper> S): void
+disembarkTroopers(): void
+rollCall(): void
+fireLaserCannons(Target T): void
+fireHeavyBlasters(Target T): void
+assaultPosition(Position P): void

Method	Input	Processing
moveToPosition	Position	Changes the ATAT currentPosition object to the specified Position object
embarkTroopers	ArrayList<Stormtroopers>	Stores the Stormtroopers in the argument ArrayList in the cargoModule object of the ATAT object and prints to the console [size of ArrayList] Stormtroopers onboard.
disembarkTroopers	None	Removes all Stormtrooper objects from the cargoModule of the ATAT object and prints 'All Stormtroopers off loaded' to the console.
rollCall	None	Prints to console the count of all Stormtroopers that are currently onboard the ATAT formatted as [count] Stormtroopers currently aboard'
fireLaserCannons	Target	Calls the fireCannons() for both WeaponPlatform objects of the cmdModule
fireHeavyBlasters	Target	Calls the fireBlaster() for both WeaponPlatform objects of the cmdModule
assaultPosition	Position	Calls the moveToPosition() and prints 'Assaulting [Position].displayPosition()

ATAT Module Structure



Methods will be developed later as part of HW 8

Supporting Classes Command Module

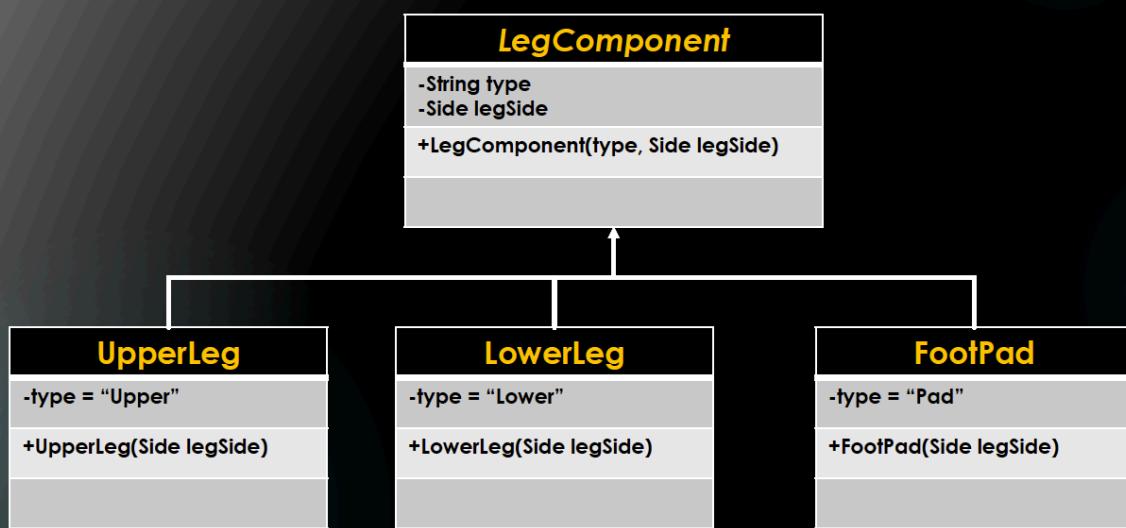
WeaponPlatform
-String type -LaserCannon laser -HeavyBlaster blaster
+WeaponPlatform(String type)
+fireCannon(Target T): void +fireBlaster(Target T): void

HeavyBlaster
-int maxRange -int minRange -int ammoCapacity -int currentAmmo
+HeavyBlaster()
+fire(): boolean +reload():boolean

LaserCannon
-int maxRange -int ammoCapacity -int currentAmmo
+LaserCannon()
+fire(): boolean +rapidFire(): boolean +reload():boolean

Method	Class	Input	Processing
fireBlaster	WeaponPlatform	Target T	Calls the fire() of blaster attribute object, if the range from the current location of the ImperialWalker object is less than maxRange of the laser attribute object and greater than or equal to the minRange of the laser attribute object
fireCannon	WeaponPlatform	Target T	Calls the fire() of the laser attribute object
fire	HeavyBlaster	None	Prints 'Firing Heavy Blaster' to the console if the currentAmmo is greater than 1, reduces currentAmmo by 1 and returns true...otherwise returns false and prints 'Ammunition Expended' to the console.
reload	HeavyBlaster	None	Sets the currentAmmo attribute equal to the ammoCapacity and returns true.
fire	LaserCannon	None	Prints 'Firing Laser Cannon*' to the console if the currentAmmo is greater than 1, reduces currentAmmo by 1 and returns true...otherwise returns false and prints 'Ammunition Expended' to the console.
rapidFire	LaserCannon	None	Prints 'Firing Laser Cannon***' to the console if the currentAmmo is greater than 3, reduces currentAmmo by 3 and returns true...otherwise returns false and prints 'Ammunition Expended' to the console.
reload	LaserCannon	None	Sets the currentAmmo attribute equal to the ammoCapacity and returns true.

Supporting Classes R/L Leg Modules



Supporting Classes/Enumerations

Location
-int x -int y -int z
+Location(int x, int y, int z)
+getEuclidean(Location L): double +toString(): String

Position
-String name -Location pos
+Position(String name, Location L)
+distanceToPosition(Position P): double +displayPosition(): void

Target
-String tgt -boolean isAlive -Position pos
+Target(String tgt)
+toString(): String

<<ENUM>>
Side
Left, Right
-String name
-Side(String name)

<<ENUM>>
Crewman
Driver("Driver")
Commander("Commander")
Gunner("Gunner")
-String type
-Crewman(String tgt)

<<ENUM>>
Stormtrooper
Standard("Standard",76,215,25)
Scout("Scout",72,185,28)
Assault("Assault",74,230,26)
-String type
-int height
-int weight
-int age
-Stormtrooper(String type, int height, int weight, int age)

<<ENUM>>
AccessRamp
ATAT("Heavy Ramp")
ATST("Soft Ramp")
-String type
-AccessRamp(String type)

Learn more about
Enumerations here

[https://docs.oracle.com/
javase/tutorial/java/java
OO/enum.html](https://docs.oracle.com/javase/tutorial/java/javaOO/enum.html)