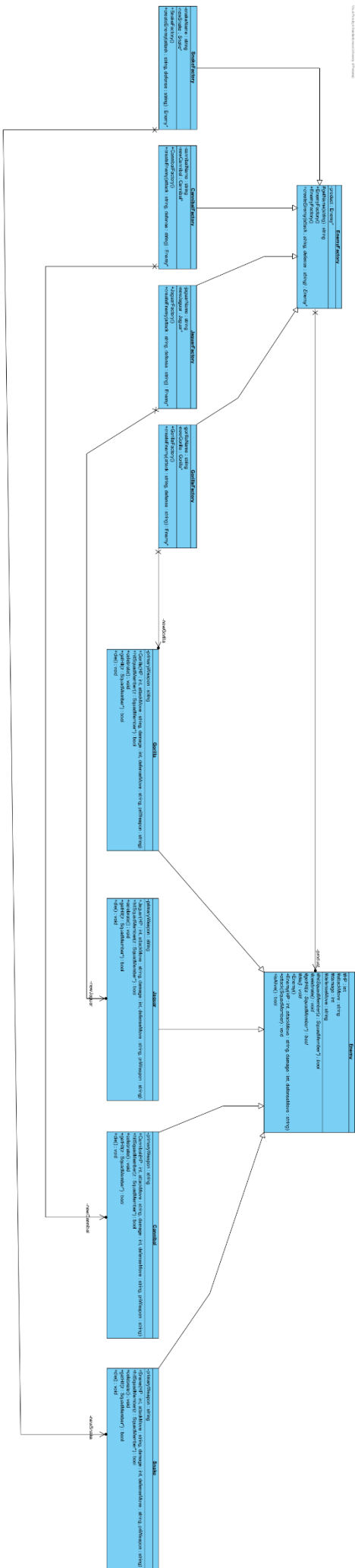**COS 214 – Prac2**

16 August 2022

Carlie van wyk

Task 1:

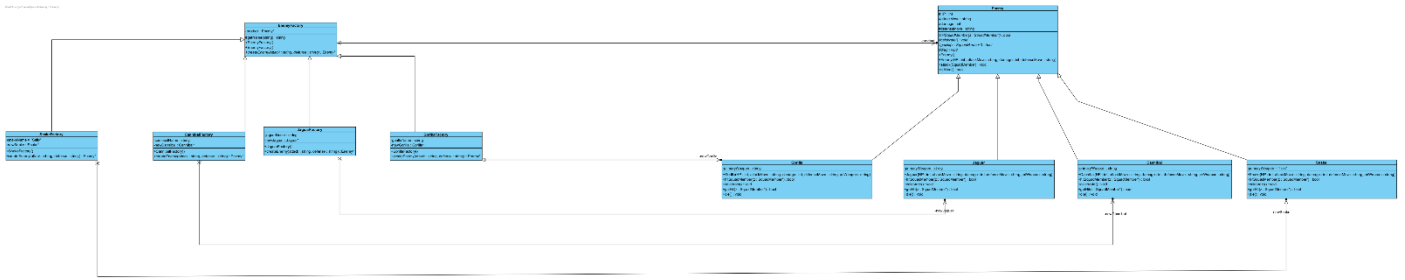1.3) I implemented the template method because it has an Abstract class (Enemy) and concrete classes (snake, gorilla etc).

Task 2:

2.4)

2.5)

2.6)

Participants:

Creator, concrete creators and product, concrete products.

Methods:

Factory method (EnemyFactory and Enemy, etc) and template method(Enemy hierarchy).

2.7)

The factory method was implemented.

Task 4

4.3)

EnemyFactory
- product : Enemy*
- getName(string) : string
- +EnemyFactory()
- +createEnemy(attack : string, defense : string) : Enemy*

Enemy
- #HP : int
- #attackMove : string
- #damage : int
- #defenseMove : string
- +listSquadMembers() : SquadMember*) : bool
- #celebrate() : void
- +getHit() : SquadMember*) : bool
- #die() : void
- #Enemy()
- #Enemy(HP : int, attackMove : string, damage : int, defenseMove : string)
- #attack(SquadMember) : void
- #isAlive() : bool

SnakeFactory
- snakeName : string
- newSnake : Snake*
- +SnakeFactory()
- +createEnemy(attack : string, defense : string) : Enemy*

CannibalFactory
- cannibalName : string
- newCannibal : Cannibal*
- +CannibalFactory()
- +createEnemy(attack : string, defense : string) : Enemy*

JaguarFactory
- jaguarName : string
- newJaguar : Jaguar*
- +JaguarFactory()
- +createEnemy(attack : string, defense : string) : Enemy*

GorillaFactory
- gorillaName : string
- newGorilla : Gorilla*
- +GorillaFactory()
- +createEnemy(attack : string, defense : string) : Enemy*

Gorilla
- primaryWeapon : string
- +Gorilla(HP : int, attackMove : string, damage : int, defenseMove : string, priWeapon : string)
- +listSquadMembers() : SquadMember*) : bool
- celebrate() : void
- +getHit() : SquadMember*) : bool
- die() : void

Jaguar
- primaryWeapon : string
- +Jaguar(HP : int, attackMove : string, damage : int, defenseMove : string, priWeapon : string)
- +listSquadMembers() : SquadMember*) : bool
- celebrate() : void
- +getHit() : SquadMember*) : bool
- die() : void

Cannibal
- primaryWeapon : string
- +Cannibal(HP : int, attackMove : string, damage : int, defenseMove : string, priWeapon : string)
- +listSquadMembers() : SquadMember*) : bool
- celebrate() : void
- +getHit() : SquadMember*) : bool
- die() : void

Snake
- primaryWeapon : string
- +Snake(HP : int, attackMove : string, damage : int, defenseMove : string, priWeapon : string)
- celebrate() : void
- +getHit() : SquadMember*) : bool
- die() : void