## **IEntity**

- id: int
- graph: IGraph\*
- + IEntity()
- + GetID(): int
- + GetPosition(): Vector3
- +GetDirection(): Vector3
- +GetDestination(): Vector3
- +GetDetails(): JsonObject
- +GetSpeed(): float
- +GetAvailability(): bool
- +SetAvaliablility(bool): void
- +Update(double dt,

std::vector<IEntity\*> scheduler):

- void
- +SetGraph(IGraph\* graph): void +SetPosition(Vector3 pos\_) : void
- +SetDirection(Vector dir\_\_): void
- +SetDestination(Vector3 des\_):
- void
- +Rotate(double dt): void

## Hoop

- JsonObject: details
- Vector3: position
- Vector3: direction
- float: jumpHeight
- bool: goUp
- Vector3: destination
- float: speed
- bool: available
- bool: pickedUp
- string: strategyName
- IEntity: nearestEntity
- IS trategy \*: to Target Pos Strategy
- IS trategy: to Target Dest Strategy

- +Basketball()
- + ~Basketball()
- + GetPosition(): Vector3
- +GetSpeed(): float
- +GetAvailability(): bool
- +GetDetails(): JsonObject +GetDirection(): Vector3
- +GetDestination(): Vector3
- +GetAvailability(): bool
- +SetPosition(Vector3 pos\_): void

Basketball

JsonObject: detailsVector3: position

- Vector3: direction

- float: jumpHeight

- Vector3: destination

- string: strategyName

- IEntity: nearestEntity

-IStrategy\*:toTargetPosStrategy

-IStrategy:toTargetDestStrategy

- bool: goUp

- float: speed

- bool: available

- bool: pickedUp

- +SetDirection(Vector dir\_\_): void
- +SetDestination(Vector3 des\_):
- +Rotate(double dt): void
- +Update(double dt,
- std::vector<IEntity\*> scheduler): void

- +Hoop()
- +~Hoop(
- + GetPosition(): Vector3
- +GetSpeed(): float
- +GetAvailability(): bool
- +GetDetails(): JsonObject
- +GetDirection(): Vector3
- +GetDestination(): Vector3
- +GetAvailability(): bool
- +SetPosition(Vector3 pos\_): void
- +SetDirection(Vector dir\_\_): void
- +SetDestination(Vector3 des\_): void
- +Rotate(double dt): void
- +Update(double dt,
- std::vector<IEntity\*> scheduler): void