## **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

## Basketball

- JsonObject: details
- Vector3: position
- Vector3: direction
- float: jumpHeight
- bool: goUp
- Vector3: destination
- float: speed
- bool: available
- bool: pickedUp
- string: strategyName
- IEntity: nearestEntity
- -IStrategy\*:toTargetPosStrategy
- -IStrategy:toTargetDestStrategy
- +Basketball()
- + ~Basketball()
- + GetPosition(): Vector3
- +GetSpeed(): float
- +GetAvailability(): bool
- +GetDetails(): JsonObject
- +GetDirection(): Vector3 +GetDestination(): Vector3
- +GetAvailability(): bool
- +SetAvaliablility(bool): void
- +SetPosition(Vector3 pos\_): void
- +SetDirection(Vector dir\_\_): void
- +SetDestination(Vector3 des\_):
- +Rotate(double dt): void
- +Update(double dt,
- std::vector<IEntity\*> scheduler): void

## Hoop

- JsonObject: details
- Vector3: position
- float: jumpHeight
- bool: goUp
- bool: available
- string: strategyName
- IEntity: nearestEntity
- +Hoop()
- +~Hoop(
- + GetPosition(): Vector3
- +GetAvailability(): bool
- +GetDetails(): JsonObject
- +GetAvailability(): bool +SetAvaliablility(bool): void
- +SetPosition(Vector3 pos\_): void