## 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 = 0
bool goUp = true
Vector3 destination;
float speed;
bool available;
bool pickedUp
std::string strategyName =
"astar";
IEntity* nearestEntity = NULL;
IStrategy* toTargetPosStrategy
= NULL;
IStrategy*
toTargetDestStrategy = NULL;

+Basketball()
+ ~Basketball()
+ 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

## Hoop

JsonObject details;
Vector3 position;
Vector3 direction;
float jumpHeight = 0
bool goUp = true
Vector3 destination;
float speed;
bool available;
bool pickedUp
std::string strategyName =
"astar";
IEntity* nearestEntity = NULL;
IStrategy* toTargetPosStrategy
= NULL;
IStrategy*
toTargetDestStrategy = NULL;

+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