ISpatialIndex < T >+ virtual void insert(const T &object, float x, float y)=0 + virtual std::vector< T > query(float x, float y, float range)=0 + virtual void update(const T &object, float newX, float newY)=0 + virtual void remove(const T &object)=0 + virtual void clear()=0 + virtual ~ISpatialIndex ()=default OptimizedSpatialIndex< T > + std::vector< std::shared

_ptr< SpatialObject< T > > > spatialObjects

std::unique_ptr< OptimizedSpatial

static const int MAX_OBJECTS

float size

> offset

(float size)

override

+ void clear() override
+ ~OptimizedSpatialIndex
() override=default
- void _query(float x, float y, float range, std::vector < T > &result)

bool inBounds(const std

float offsetY)
void subdivide()
bool canMerge() const

void merge()

 bool isEmpty() const
 bool intersectsRange(float min_x, float max_x, float min_y, float max_y) const

int getChildIndex(float x, float y) const
 float getDistance(float x1, float y1, float x2, float y2) const

::pair< float, float > &pos) const void setOffset(float offsetX,

bool isSubdivided

Index< T > > children std::pair< float, float

static const int MIN_SIZE+ OptimizedSpatialIndex

+ void insert(const T & object, float x, float y) override
+ std::vector< T > query (float x, float y, float range) override

 + void update(const T &object, float newX, float newY) override
 + void remove(const T &object)