C++ 基础

模板

模板形参

1 类型形参

template<typename T>

class Test{}

2 非类型形参

template<typename T ,int a, bool kSwap>

class Test{}

# 目录结构

Allocator

Animation

Audio

BaseClasses

# BaseClasses

***BaseClasses/ClassIDs.h***

#define ClassID(x) CLASS\_##x

#define DefineClassID(x,classID) ClassID(x)=classID,

enum ClassIDType

{

DefineClassID(Object,0) // CLASS\_OBJECT = 0,

DefineClassID(GameObject,1) // CLASS\_GameObject = 1,

kLargestRuntimeClassID,

DefineClassID(SmallestEditorClassID,1000)

kLargestEditorClassID,

kClassIdOutOfHierarchy = 100000,

}

CLASS\_MonoObject = 100003

***BaseClasses/BitField.h***

struct BitField

{

// 宏展开

/\*

inline static const char\* GetTypeString(){return “BitField”}

inline static bool IsAnimationChannel(){return false;}

inline static bool MightContainPtr(){return false;}

inline static bool AllowTransferOptimization(){return true;}

template<class TransferFunction>

void Transfer(TransferFunction& transfer);

\*/

DECLARE\_SERIALIZE\_OPTIMIZE\_TRANSFER(BitField)

UInt32 m\_Bits;

}

template<class TransferFunc>

void BitField::Transfer(TransferFunc& transfer)

{

}

***BaseClasses/Tags.h***

***BaseClasses/Tags.cpp***

***BaseClasses/TagsTests.cpp***

标签 ID Layer 有序

自定义STL Allocator，参考内存管理部分

Layer 有哪些属性

标签

{

UInt32 ID;

std::string name;

}

static StringToUnsigned\* gStringToTag;

static UnsignedToString\* gTagToString;

static int\* gTagManagerContainer

static StringToUnsigned\* gStringToMask

static std::string gMaskToString[32] LayerIndex LayerName

功能 ID和name相互转换，添加一个tag

Layer 层

name

mask 掩码 与 ID的转换规则

id

0 – 0

1 – 2

2 – 4

3 – 2^3

31 – 2^31

const std::string& LayerToString(UInt32 layer)

最多支持32个Layer

注意：唯一ID 非加密型HASH算法 murmurhash2a

Object

ClassID

RTTI

如何实现RTTI ?

BaseClasses/NamedObject.h

BaseClasses/NamedObject.cpp

# Utilities