# Kampf Game Engine

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# Contents

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# Hierarchical Index

## 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

# Chapter 2

# Class Index

## 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

# Chapter 3

# File Index

## 3.1 File List

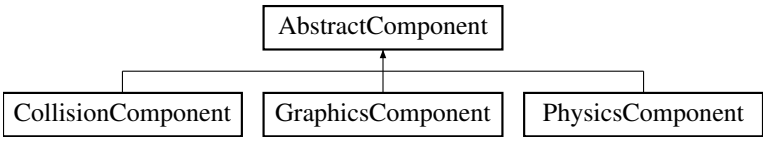
Here is a list of all documented files with brief descriptions:

# Chapter 4

# Class Documentation

## 4.1 AbstractComponent Class Reference

Inheritance diagram for AbstractComponent:




### Public Member Functions

- **AbstractComponent** (stringType name, enumComponentFamily family=enumComponentFamily::ABSTRACT, bool bIsParent=true)
- const stringType & **getName** ()
- void **setName** (stringType)
- enumComponentFamily **getFamily** ()
- bool **isParent** ()
- bool **isActive** ()
- void **setActive** ()
- void **setInactive** ()
- integerType **getCustomAttribute_int** (stringType)
- stringType **setCustomAttribute** (stringType, integerType)
- floatType **getCustomAttribute_float** (stringType)
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- stringType & **getCustomAttribute_string** (stringType)
- stringType **setCustomAttribute** (stringType, stringType)
- void * **getCustomAttribute_void** (stringType)
- stringType **setCustomAttribute** (stringType, void *)
- bool **hasCustomAttribute** (stringType)
- enumAttribute **getCustomAttributeType** (stringType)
- void **deleteCustomAttribute** (stringType)

- CustomAttribute * **get** (stringType)
- void **set** (stringType, CustomAttribute)
- virtual AbstractComponent * **createChild** (stringType name)
- void **addChild** (AbstractComponent *)
- bool **hasChildren** ()
- const componentContainerType * **getChildContainer** ()

### Public Attributes

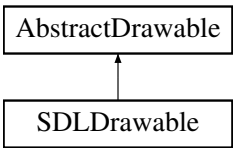
- bool **bEnabled** = true

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/AbstractComponent.hpp
- /home/benzap/Projects/kampf/src/AbstractComponent.cpp

## 4.2 AbstractDrawable Class Reference

Inheritance diagram for AbstractDrawable:




### Public Member Functions

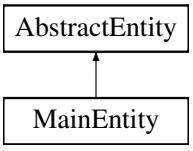
- **AbstractDrawable** (stringType type)
- virtual int **draw** (Vector3 position=Vector3(), Quaternion orientation=Quaternion())=0
- const stringType & **getType** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/AbstractDrawable.hpp
- /home/benzap/Projects/kampf/src/AbstractDrawable.cpp

## 4.3 AbstractEntity Class Reference

Inheritance diagram for AbstractEntity:



### Public Member Functions

- **AbstractEntity** (stringType name, incrementType id=GENERATE_ID, stringType type=ENTITY_ABSTRACT_TYPE)
- const stringType & **getName** ()
- void **setName** (stringType name)
- stringType **getType** ()
- incrementType **getID** ()
- const componentListType & **getComponentContainer** ()
- partialComponentListType **getComponentsByFamily** (enumComponentFamily family)
- partialComponentListType **getComponentsByName** (stringType name)
- void **addComponent** (AbstractComponent *theComponent)

### Static Public Attributes

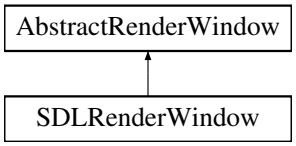
- static incrementType **EntityIncrement** = 1

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/AbstractEntity.hpp
- /home/benzap/Projects/kampf/src/AbstractEntity.cpp

## 4.4 AbstractRenderWindow Class Reference

Inheritance diagram for AbstractRenderWindow:




### Public Member Functions

- **AbstractRenderWindow** (int windowWidth=DEFAULT_VIRTUAL_SCREEN_WIDTH, int windowHeight=DEFAULT_VIRTUAL_SCREEN_HEIGHT)
- virtual bool **reinitialize** ()=0
- virtual bool **initialize** ()=0
- virtual void **draw** (AbstractDrawable *drawable, Vector3 position, Quaternion orientation)=0
- virtual boolType **update** ()=0
- virtual boolType **clear** ()=0
- virtual const std::vector< int > **getWindowSize** ()
- virtual void **setWindowSize** (floatType w, floatType h)
- const Viewport * **getViewport** ()
- void **setViewport** (Viewport viewport)
- void **setViewport** (integerType x, integerType y, integerType w, integerType h)
- const Resolution * **getResolution** ()
- void **setResolution** (floatType w, floatType h)
- virtual floatType **getScaledWidthFactor** ()
- virtual floatType **getScaledHeightFactor** ()

### Protected Attributes

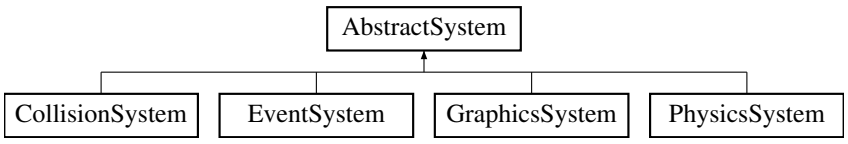
- int **windowWidth**
- int **windowHeight**

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/AbstractRenderWindow.hpp
- /home/benzap/Projects/kampf/src/AbstractRenderWindow.cpp

## 4.5 AbstractSystem Class Reference

Inheritance diagram for AbstractSystem:




### Public Member Functions

- **AbstractSystem** (stringType type)
- virtual void **createMessages** ()=0
- virtual void **process** ()=0

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/AbstractSystem.hpp
- /home/benzap/Projects/kampf/src/AbstractSystem.cpp

## 4.6 COL_circle_struct Struct Reference

### Public Attributes

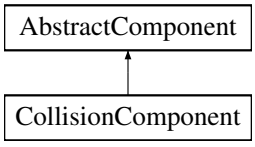
- Vector3 **center**
- floatType **radius**

The documentation for this struct was generated from the following file:

- /home/benzap/Projects/kampf/src/collision/collision_circle.hpp

## 4.7 CollisionComponent Class Reference

Inheritance diagram for CollisionComponent:



### Public Member Functions

- **CollisionComponent** (stringType name, bool bIsParent=true)
- virtual AbstractComponent * **createChild** (stringType name)
- void **setPhysicsRelation** (PhysicsComponent *)
- PhysicsComponent * **getPhysicsRelation** ()
- void **setOffset** (Vector3)
- const Vector3 & **getOffset** ()
- void **setOrigin** (Vector3)
- const Vector3 & **getOrigin** ()
- void **setOrientation** (Quaternion)
- Quaternion **getOrientation** ()
- void **setCollisionType** (enumCollisionType)
- enumCollisionType **getCollisionType** ()
- void **setCollisionTypeString** (stringType)
- stringType **getCollisionTypeString** ()
- void **setRadius** (floatType)
- floatType **getRadius** ()
- void **setWidth** (floatType)
- floatType **getWidth** ()
- void **setHeight** (floatType)
- floatType **getHeight** ()
- void **setVectorList** (std::vector< Vector3 >)
- std::vector< Vector3 > **getVectorList** ()

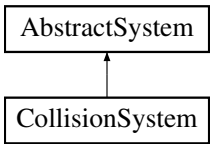
### Additional Inherited Members

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/CollisionComponent.hpp
- /home/benzap/Projects/kampf/src/CollisionComponent.cpp

## 4.8 CollisionSystem Class Reference

Inheritance diagram for CollisionSystem:




### Public Member Functions

- void **createMessages** ()
- void **process** ()
- boolType **checkCollisions** (Entity *firstEntity, CollisionComponent *firstColl, Entity *secondEntity, CollisionComponent *secondColl)

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/CollisionSystem.hpp
- /home/benzap/Projects/kampf/src/CollisionSystem.cpp

## 4.9 CustomAttribute Class Reference

### Public Member Functions

- **CustomAttribute** (integerType iValue)
- **CustomAttribute** (floatType fValue)
- **CustomAttribute** (charType cValue)
- **CustomAttribute** (intArrayType *)
- **CustomAttribute** (floatArrayType *)
- **CustomAttribute** (stringType *)
- **CustomAttribute** (void *)
- integerType **get_int** ()
- void **set** (integerType iValue)
- floatType **get_float** ()
- void **set** (floatType fValue)
- charType **get_char** ()
- void **set** (charType cValue)
- intArrayType * **get_intArray** ()
- void **set** (intArrayType *)
- floatArrayType * **get_floatArray** ()
- void **set** (floatArrayType *)
- stringType * **get_string** ()
- void **set** (stringType *)
- void * **get_void** ()
- void **set** (void *)
- enumAttribute **getType** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/CustomAttribute.hpp
- /home/benzap/Projects/kampf/src/CustomAttribute.cpp

## 4.10 CustomAttributeUnion Union Reference

### Public Attributes

- integerType **i**
- floatType **f**
- charType **c**
- stringType * **s**
- void * **v**

The documentation for this union was generated from the following file:

- /home/benzap/Projects/kampf/src/CustomAttribute.hpp

## 4.11 EntityManager Class Reference

### Public Member Functions

- void **addEntity** (AbstractEntity *entity)
- const AbstractEntity * **getEntityByID** (incrementType ID)
- const entityManagerType & **getEntities** ()

### Static Public Member Functions

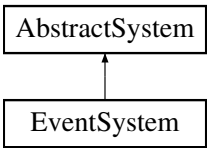
- static EntityManager * **getInstance** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/EntityManager.hpp
- /home/benzap/Projects/kampf/src/EntityManager.cpp

## 4.12 EventSystem Class Reference

Inheritance diagram for EventSystem:




### Public Member Functions

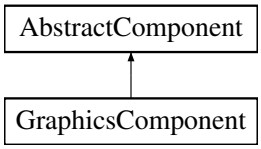
- void **createMessages** ()
- void **process** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/EventSystem.hpp
- /home/benzap/Projects/kampf/src/EventSystem.cpp

## 4.13 GraphicsComponent Class Reference

Inheritance diagram for GraphicsComponent:




### Public Member Functions

- **GraphicsComponent** (stringType name, bool bIsParent=true)
- virtual AbstractComponent * **createChild** (stringType name)
- void **setDrawable** (AbstractDrawable *)
- AbstractDrawable * **getDrawable** ()
- void **setDrawableKey** (stringType)
- stringType **getDrawableKey** ()

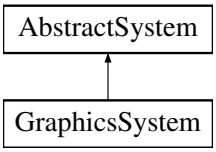
### Additional Inherited Members

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/GraphicsComponent.hpp
- /home/benzap/Projects/kampf/src/GraphicsComponent.cpp

## 4.14 GraphicsSystem Class Reference

Inheritance diagram for GraphicsSystem:




### Public Member Functions

- **GraphicsSystem** (enumRenderType)
- void **createMessages** ()
- void **process** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/GraphicsSystem.hpp
- /home/benzap/Projects/kampf/src/GraphicsSystem.cpp

## 4.15 Kampf Class Reference

### Public Member Functions

- **Kampf** (enumInitType initType=enumInitType::Basic, enumWindowType windowType=enumWindowType::SDL, enumRenderType renderType=enumRenderType::SDL)
- void **runMainLoop** (int duration=KF_LOOP_FOREVER)
- AbstractRenderWindow * **getWindowContext** ()
- AbstractSystem * **getSystem** (stringType systemType)
- void **addSystem** (AbstractSystem *)
- Messenger * **getMessenger** ()
- void **addRule** (RuleCondition, RuleFunction)
- RuleMachine * **getRuleMachine** ()
- LuaScript * **getLua** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/kampf.hpp
- /home/benzap/Projects/kampf/src/kampf.cpp

## 4.16 LuaScript Class Reference

### Public Member Functions

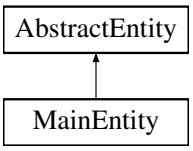
- **LuaScript** (Kampf ∗kf=nullptr)
- lua_State ∗ **getState** ()
- void **setGlobal** (stringType, floatType)
- floatType **getGlobal_float** (stringType)
- void **setGlobal** (stringType, integerType)
- integerType **getGlobal_int** (stringType)
- void **setGlobal** (stringType, stringType)
- stringType **getGlobal_string** (stringType)
- void **setGlobal** (stringType, floatArrayType)
- floatArrayType **getGlobal_floatArray** (stringType)
- void **setGlobal** (stringType, intArrayType)
- intArrayType **getGlobal_intArray** (stringType)
- boolType **loadScript** (stringType)
- boolType **loadString** (stringType, stringType name="stdin")
- void **runInterpreter** ()
- void **addPath** (stringType)
- void **clearPath** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/LuaScript.hpp
- /home/benzap/Projects/kampf/src/LuaScript.cpp

## 4.17 MainEntity Class Reference

Inheritance diagram for MainEntity:




### Public Member Functions

- **MainEntity** (stringType name, incrementType id=GENERATE_ID)

### Additional Inherited Members

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/MainEntity.hpp
- /home/benzap/Projects/kampf/src/MainEntity.cpp

## 4.18 Matrix3 Class Reference

### Public Member Functions

- **Matrix3** (std::initializer_list< floatType > l)
- void **fill** (floatType)
- void **identity** (floatType)
- Vector3 **row** (integerType)
- Vector3 **col** (integerType)
- floatType **det** ()
- floatType **get** (int i, int j)
- void **set** (int i, int j, floatType val)
- void **set** (std::initializer_list< floatType > l)
- floatType & **operator[]** (integerType i)
- boolType **operator==** (const Matrix3 &o)
- Matrix3 **operator+** (const Matrix3 &o)
- void **operator+=** (const Matrix3 &o)
- Matrix3 **operator-** (const Matrix3 &o)
- Matrix3 **operator-** ()
- void **operator-=** (const Matrix3 &o)
- Matrix3 **operator*** (const Matrix3 &o)
- void **operator*=** (const Matrix3 &o)
- Matrix3 **operator*** (const floatType f)
- void **operator*=** (const floatType f)
- Matrix3 **operator%** (Matrix3 &o)
- void **operator%=** (Matrix3 &o)
- Vector3 **operator%** (Vector3 &o)

### Public Attributes

- floatType **data** [9]

### Static Public Attributes

- static const int **length** = 9
- static const int **width** = 3

### Friends

- std::ostream & **operator<<** (std::ostream &os, Matrix3 const &_this)

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/KF_Matrix3.hpp
- /home/benzap/Projects/kampf/src/KF_Matrix3.cpp

## 4.19 Message Class Reference

### Public Member Functions

- **Message** (incrementType id)
- incrementType **getID** ()
- enumMessageType **getType** ()
- stringType **getTypeString** ()
- void **setType** (enumMessageType)
- void **setTypeString** (stringType typeString)

### Public Attributes

- AbstractEntity * **firstEntity** = nullptr
- AbstractComponent * **firstComponent** = nullptr
- AbstractEntity * **secondEntity** = nullptr
- AbstractComponent * **secondComponent** = nullptr
- std::map< stringType, CustomAttribute > **customData**
- void * **data** = nullptr

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/Message.hpp
- /home/benzap/Projects/kampf/src/Message.cpp

## 4.20 Messenger Class Reference

### Public Member Functions

- Message * **appendMessage** ()
- const messageContainer & **retrieveMessages** ()
- void **clearMessages** ()

### Static Public Member Functions

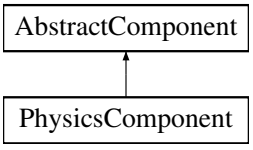
- static Messenger * **getInstance** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/Mesenger.hpp
- /home/benzap/Projects/kampf/src/Messenger.hpp
- /home/benzap/Projects/kampf/src/Messenger.cpp

## 4.21 PhysicsComponent Class Reference

Inheritance diagram for PhysicsComponent:



### Public Member Functions

- **PhysicsComponent** (stringType name, bool bIsParent=true)
- virtual AbstractComponent * **createChild** (stringType name)
- void **setPosition** (Vector3)
- const Vector3 & **getPosition** ()
- void **setVelocity** (Vector3)
- const Vector3 & **getVelocity** ()
- void **setAcceleration** (Vector3)
- const Vector3 & **getAcceleration** ()
- void **setScale** (Vector3)
- const Vector3 & **getScale** ()
- void **setOrientation** (Quaternion)
- const Quaternion & **getOrientation** ()
- void **setDamping** (floatType)
- floatType **getDamping** ()
- void **setMass** (floatType)
- floatType **getMass** ()

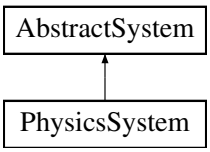
### Additional Inherited Members

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/PhysicsComponent.hpp
- /home/benzap/Projects/kampf/src/PhysicsComponent.cpp

## 4.22 PhysicsSystem Class Reference

Inheritance diagram for PhysicsSystem:




### Public Member Functions

- void **createMessages** ()
- void **process** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/PhysicsSystem.hpp
- /home/benzap/Projects/kampf/src/PhysicsSystem.cpp

## 4.23 Quaternion Class Reference

### Public Member Functions

- **Quaternion** (floatType w=0, floatType i=0, floatType j=0, floatType k=0)
- integerType **length** ()
- Quaternion **operator+** (const Quaternion &o)
- void **operator+=** (const Quaternion &o)
- Quaternion **operator+** (const Vector3 &o)
- floatType **operator*** (const Quaternion &o)
- floatType **operator*** (const Vector3 &o)
- Quaternion **operator*** (floatType f)
- void **operator*=** (floatType f)
- floatType & **operator[]** (integerType i)
- bool **operator==** (const Quaternion &o)
- Quaternion **conj** ()
- Quaternion **inv** ()
- Quaternion **operator-** ()
- floatType **magnitude_real** ()
- floatType **magnitude** ()
- Quaternion **unit** ()
- Quaternion **product** (const Quaternion &o)
- Quaternion **operator%** (const Quaternion &o)
- void **operator%=** (const Quaternion &o)

### Public Attributes

- Vector3 **v**
- floatType **w**

### Friends

- std::ostream & **operator<<** (std::ostream &os, Quaternion const &_this)

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/KF_Quaternion.hpp
- /home/benzap/Projects/kampf/src/KF_Quaternion.cpp

## 4.24 Resolution Struct Reference

### Public Attributes

- integerType **w**
- integerType **h**

The documentation for this struct was generated from the following file:

- /home/benzap/Projects/kampf/src/AbstractRenderWindow.hpp

## 4.25 RuleMachine Class Reference

### Public Member Functions

- void **process** ()
- incrementType **addRule** (RuleCondition, RuleFunction)
- void **removeRule** (incrementType)

### Static Public Attributes

- static incrementType **RuleIncrement** = 1

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/RuleMachine.hpp
- /home/benzap/Projects/kampf/src/RuleMachine.cpp

## 4.26 RuleWrapper_condition Class Reference

### Public Member Functions

- **RuleWrapper_condition** (lua_State *L, int index)
- boolType **operator()** (Message *msg)

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/l_RuleWrapper.hpp
- /home/benzap/Projects/kampf/src/l_RuleWrapper.cpp

## 4.27 RuleWrapper_function Class Reference

### Public Member Functions

- **RuleWrapper_function** (lua_State *L, int index)
- void **operator()** (Message *msg)

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/l_RuleWrapper.hpp
- /home/benzap/Projects/kampf/src/l_RuleWrapper.cpp

## 4.28 SDLAssetManager Class Reference

### Public Member Functions

- void **setWindowContext** (SDLRenderWindow *)
- SDLDrawable * **addSurface** (stringType, SDL_Surface *, SDL_Rect *=nullptr)
- SDLDrawable * **addBMP** (stringType name, const stringType &filename, SDL_Rect *rect=nullptr)
- boolType **hasDrawable** (const stringType &)
- SDLDrawable * **getDrawable** (const stringType &)
- boolType **removeDrawable** (const stringType &)

### Static Public Member Functions

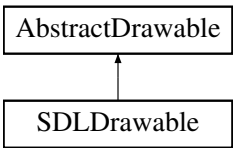
- static SDLAssetManager * **getInstance** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/SDLAssetManager.hpp
- /home/benzap/Projects/kampf/src/SDLAssetManager.cpp

## 4.29 SDLDrawable Class Reference

Inheritance diagram for SDLDrawable:




### Public Member Functions

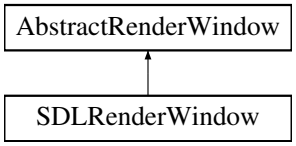
- **SDLDrawable** (SDL_Surface *surface, SDLRenderWindow *windowContext)
- int **draw** (Vector3 position=Vector3(), Quaternion orientation=Quaternion())
- void **setRect** (SDL_Rect *)
- void **setRect** (integerType x, integerType y, integerType w, integerType h)
- const SDL_Rect * **getRect** ()
- void **setColorKey** (unsigned short r, unsigned short g, unsigned short b)
- void **setWindowContext** (SDLRenderWindow *)
- std::vector< int > **getSize** ()

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/SDLDrawable.hpp
- /home/benzap/Projects/kampf/src/SDLDrawable.cpp

## 4.30 SDLRenderWindow Class Reference

Inheritance diagram for SDLRenderWindow:




### Public Member Functions

- **SDLRenderWindow** (int windowWidth=SDL_INTERNAL_RESOLUTION_WIDTH, int windowHeight=SDL_INTERNAL_RESOLUTION_HEIGHT)
- bool **reinitialize** ()

- bool **initialize** ()
- void **draw** (AbstractDrawable ∗drawable, Vector3 position=Vector3(), Quaternion orientation=Quaternion())
- boolType **update** ()
- boolType **clear** ()
- void **setWindowFlags** (Uint32 windowFlags)
- void **setRendererFlags** (Uint32 rendererFlags)
- void **setPosition** (int xPosition, int yPosition)
- void **setTitle** (stringType title)
- SDL_Window ∗ **getWindow** ()
- SDL_Renderer ∗ **getRenderer** ()
- virtual const std::vector< int > **getWindowSize** ()
- virtual void **setWindowSize** (floatType w, floatType h)
- virtual floatType **getScaledWidthFactor** ()
- virtual floatType **getScaledHeightFactor** ()

### Additional Inherited Members

The documentation for this class was generated from the following files:

- /home/benzap/Projects/kampf/src/SDLRenderWindow.hpp
- /home/benzap/Projects/kampf/src/SDLRenderWindow.cpp

## 4.31 Vector3 Class Reference

### Public Member Functions

- **Vector3** (floatType x=0, floatType y=0, floatType z=0)
- integerType **length** ()
- Vector3 **operator+** (const Vector3 &o)
- void **operator+=** (const Vector3 &o)
- Vector3 **operator+** (floatType f)
- void **operator+=** (floatType f)
- Vector3 **operator-** (const Vector3 &o)
- void **operator-=** (const Vector3 &o)
- Vector3 **operator-** (floatType f)
- void **operator-=** (floatType f)
- floatType **operator**∗ (const Vector3 &o)
- Vector3 **operator**∗ (floatType f)
- void **operator∗=** (floatType f)
- floatType & **operator[]** (integerType i)
- bool **operator==** (const Vector3 &o)
- Vector3 **operator-** ()
- Vector3 **comp_prod** (const Vector3 &o)
- void **comp_prod_update** (const Vector3 &o)
- floatType **magnitude_real** ()
- floatType **magnitude** ()
- Vector3 **unit** ()
- Vector3 **cross** (const Vector3 &o)
- Vector3 **operator%** (const Vector3 &o)
- void **operator%=** (const Vector3 &o)

### Public Attributes

- floatType **pad** = 3
- floatType **x** = 0
- floatType **y** = 0
- floatType **z** = 0

### Friends

- std::ostream & **operator**<< (std::ostream &os, Vector3 const &_this)

The documentation for this class was generated from the following file:

- /home/benzap/Projects/kampf/src/KF_Vector3.hpp

## 4.32 Viewport Struct Reference

### Public Attributes

- floatType **x**
- floatType **y**
- floatType **w**
- floatType **h**

The documentation for this struct was generated from the following file:

- /home/benzap/Projects/kampf/src/AbstractRenderWindow.hpp

# Chapter 5

# File Documentation

## 5.1 /home/benzap/Projects/kampf/src/AbstractComponent.hpp File Reference

Abstract for all components.

```
#include <iostream>
#include <map>
#include <string>
#include <list>
#include <memory>
#include "KF_globals.hpp"
#include "CustomAttribute.hpp"
```

### Classes

- class AbstractComponent

### Typedefs

- typedef std::map< stringType, CustomAttribute > customAttributeMapType

  *type used by abstract component to store custom attributes*
- typedef std::list < AbstractComponent * > componentContainerType

  *componentContainer type*

### Enumerations

- enum enumComponentFamily { **ABSTRACT**, **COLLISION**, **PHYSICS**, **GRAPHICS**, **CUSTOM** }

### Functions

- AbstractComponent * **createAbstractComponent** (stringType name, boolType bIsParent=true)

### 5.1.1 Detailed Description

Abstract for all components. The abstract component is used to describe each component within the system. This abstract includes all of the custom attribute functionality, which allows for more dynamic types to be included to describe a component.

Components can also store children of itself, which means you can develop a hierarchy of the same component. How this hierarchy is built depends on the type of component.

To summarize, components are containers that can fit into a tree hierarchy. These containers hold dynamic types through the CustomAttribute type.

### 5.1.2 Enumeration Type Documentation

#### 5.1.2.1 enum enumComponentFamily

The main component family enumeration. This describes what the component is, for dynamic casting.

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