Venture

Chapter 1

Venture

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Chapter 3

Class Index

3.1 Class List

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

Chapter 4

Class Documentation

4.1 Venture::Application Class Reference

Public Member Functions

- int **Run** ()
- int **Update** ()
- int **Render** ()
- int **Init** ()
- int **Shutdown** ()

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

- E:/Development/Venture/Engine/include/Application.h
- E:/Development/Venture/Engine/src/Application.cpp

4.2 Venture::File::AsyncCloseRequest Struct Reference

Inheritance diagram for Venture::File::AsyncCloseRequest:
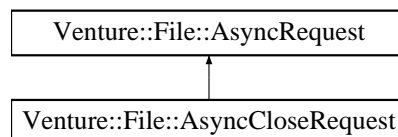
Public Member Functions

- **AsyncCloseRequest** (int fileHandle, void(∗callback)()=[ ]() {})
- int **ProcessRequest** () override

Public Attributes

- int **m_fileHandle**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/File.h
- E:/Development/Venture/Engine/src/File.cpp

4.3 Venture::File::AsyncOpenReadCloseRequest Class Reference

Inheritance diagram for Venture::File::AsyncOpenReadCloseRequest:

```
┌─────────────────────────────────────────┐
│       Venture::File::AsyncRequest        │
└─────────────────────────────────────────┘
                     ▲
┌─────────────────────────────────────────┐
│ Venture::File::AsyncOpenReadCloseRequest │
└─────────────────────────────────────────┘
```

Public Member Functions

- **AsyncOpenReadCloseRequest** (std::string path, std::string mode, void(∗callback)()=[ ]() {})
- int **ProcessRequest** () override
- Buffer **GetBuffer** ()
- size_t **GetBufferSize** ()

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/File.h
- E:/Development/Venture/Engine/src/File.cpp

4.4 Venture::File::AsyncOpenRequest Class Reference

Inheritance diagram for Venture::File::AsyncOpenRequest:

```
┌─────────────────────────────────────────┐
│       Venture::File::AsyncRequest        │
└─────────────────────────────────────────┘
                     ▲
┌─────────────────────────────────────────┐
│   Venture::File::AsyncOpenRequest        │
└─────────────────────────────────────────┘
```

Public Member Functions

- **AsyncOpenRequest** (std::string path, std::string mode, void(∗callback)()=[ ]() {})
- int **ProcessRequest** () override
- int **getFileHandle** ()

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/File.h
- E:/Development/Venture/Engine/src/File.cpp

4.5 Venture::File::AsyncReadFullRequest Struct Reference

Inheritance diagram for Venture::File::AsyncReadFullRequest:

```
┌─────────────────────────────────────┐
│   Venture::File::AsyncRequest        │
└─────────────────────────────────────┘
                 ▲
┌─────────────────────────────────────┐
│ Venture::File::AsyncReadFullRequest  │
└─────────────────────────────────────┘
```
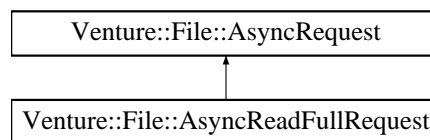
Public Member Functions

- **AsyncReadFullRequest** (int fileHandle, Buffer inputBuffer, void(∗callback)()=[ ]() {})
- int **ProcessRequest** () override

Public Attributes

- int **m_fileHandle**
- Buffer **m_inputBuffer**
- size_t **m_bufferSize**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/File.h
- E:/Development/Venture/Engine/src/File.cpp

4.6 Venture::File::AsyncReadRequest Struct Reference

Inheritance diagram for Venture::File::AsyncReadRequest:
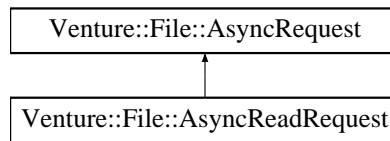
Public Member Functions

- **AsyncReadRequest** (int fileHandle, Buffer inputBuffer, size_t bufferSize, void(∗callback)()=[ ](){})
- int **ProcessRequest** () override

Public Attributes

- int **m_fileHandle**
- Buffer **m_inputBuffer**
- size_t **m_bufferSize**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/File.h
- E:/Development/Venture/Engine/src/File.cpp

4.7 Venture::File::AsyncRequest Class Reference

Inheritance diagram for Venture::File::AsyncRequest:

Public Member Functions

- virtual AsyncRequestType **GetType** ()
- virtual int **ProcessRequest** ()=0
- void **Callback** ()
- void **Signal** ()
- void **Wait** ()

Protected Member Functions

- **AsyncRequest** (AsyncRequestType type, void(∗callback)())

Protected Attributes

- AsyncRequestType **m_type**
- void(∗ **m_callback**)()
- Semaphore **sem** {0}

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

- E:/Development/Venture/Engine/include/File.h

4.8 Venture::File::AsyncWriteRequest Struct Reference

Inheritance diagram for Venture::File::AsyncWriteRequest:

```
┌─────────────────────────────────┐
│   Venture::File::AsyncRequest    │
└─────────────────────────────────┘
                 ▲
                 │
┌─────────────────────────────────┐
│ Venture::File::AsyncWriteRequest │
└─────────────────────────────────┘
```
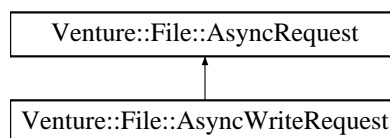
Public Member Functions

- **AsyncWriteRequest** (int fileHandle, Buffer outputBuffer, size_t bufferSize, void(∗callback)()=[ ]() {})
- int **ProcessRequest** () override

Public Attributes

- int **m_fileHandle**
- Buffer **m_outputBuffer**
- size_t **m_bufferSize**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/File.h
- E:/Development/Venture/Engine/src/File.cpp

4.9 Venture::Buffer Class Reference

Public Member Functions

- **Buffer** (size_t bytes)
- **Buffer** (const Buffer &)
- Buffer & **operator=** (const Buffer &)
- void **Create** (size_t bytes)
- char ∗ **GetBuffer** () const
- size_t **GetBytes** () const
- bool **IsNull** () const

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

- E:/Development/Venture/Engine/include/Buffer.h
- E:/Development/Venture/Engine/src/Buffer.cpp

4.10 Venture::Camera Class Reference

Inheritance diagram for Venture::Camera:
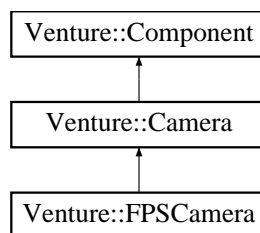
Public Member Functions

- virtual DirectX::XMFLOAT4X4 **GetViewTransform** ()=0

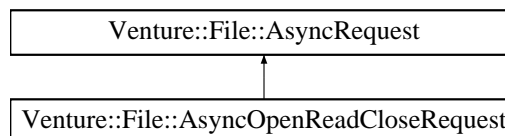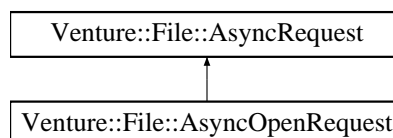### Protected Member Functions

- **Camera** (GameObject ∗parent)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/Camera.h
- E:/Development/Venture/Engine/src/Camera.cpp

4.11   Venture::CircularQueue< T > Class Template Reference

Public Member Functions

- int **Enqueue** (T event)
- T **Dequeue** ()
- T **PeekTail** ()

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

- E:/Development/Venture/Engine/include/CircularQueue.h

4.12   Venture::Component Class Reference

Inheritance diagram for Venture::Component:
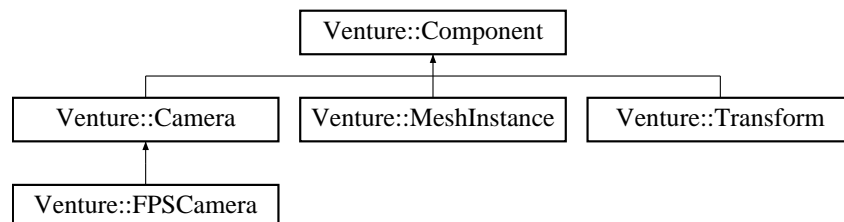
Public Member Functions

- virtual void **Update** ()
- virtual void **EarlyUpdate** ()
- virtual void **LateUpdate** ()
- ComponentType **GetType** ()
- bool **IsType** (ComponentType type)
- virtual void **ReceiveEvents** (Event event)
- GameObject ∗ **GetGameObject** ()

Protected Member Functions

- **Component** (ComponentType type, GameObject ∗parent)

Protected Attributes

- ComponentType **m_type**
- GameObject ∗ **m_parentObject**

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

- E:/Development/Venture/Engine/include/Component.h

4.13 Venture::ConstantBuffer< T > Class Template Reference

Public Member Functions

- **ConstantBuffer** (T data, unsigned int slot)
- void **UpdateData** (T data)
- void **Update** (ID3D11DeviceContext ∗context)
- bool **IsLoaded** ()
- void **Create** (ID3D11Device ∗device)
- void **Bind** (ID3D11DeviceContext ∗context)

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

- E:/Development/Venture/Engine/include/ConstantBuffer.h

4.14 Venture::ConstantBufferPerFrame Class Reference

Public Member Functions

- void **UpdateData** (DirectX::XMFLOAT4X4 view)
- bool **IsLoaded** ()
- void **Create** (ID3D11Device ∗device)
- void **Bind** (ID3D11DeviceContext ∗context)
- void **Update** (ID3D11DeviceContext ∗context)

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

- E:/Development/Venture/Engine/include/ConstantBufferPerFrame.h
- E:/Development/Venture/Engine/src/ConstantBufferPerFrame.cpp

4.15 Venture::ConstantBufferPerObject Class Reference

Public Member Functions

- void **UpdateData** (DirectX::XMFLOAT4X4 world)
- bool **IsLoaded** ()
- void **Create** (ID3D11Device ∗device)
- void **Bind** (ID3D11DeviceContext ∗context)
- void **Update** (ID3D11DeviceContext ∗context)

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

- E:/Development/Venture/Engine/include/ConstantBufferPerObject.h
- E:/Development/Venture/Engine/src/ConstantBufferPerObject.cpp

4.16 Venture::ConstantBufferResize Class Reference

Public Member Functions

- void **UpdateData** (DirectX::XMFLOAT4X4 projection)
- bool **IsLoaded** ()
- void **Create** (ID3D11Device ∗device)
- void **Bind** (ID3D11DeviceContext ∗context)
- void **Update** (ID3D11DeviceContext ∗context)

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

- E:/Development/Venture/Engine/include/ConstantBufferResize.h
- E:/Development/Venture/Engine/src/ConstantBufferResize.cpp

4.17 Venture::Cube Class Reference

Inheritance diagram for Venture::Cube:
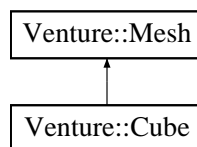
Public Member Functions

- **Cube** (float sideLength)
- Vertex ∗ **Vertices** ()
- int ∗ **Indices** ()
- size_t **NumVertices** ()
- size_t **NumIndices** ()

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

- E:/Development/Venture/Engine/include/Cube.h

4.18 Venture::DefaultGameObjects Class Reference

Static Public Member Functions

- static GameObjectHandle **GetNewCube** ()
- static GameObjectHandle **GetNewFPSCamera** ()

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

- E:/Development/Venture/Engine/include/DefaultGameObjects.h
- E:/Development/Venture/Engine/src/DefaultGameObjects.cpp

4.19 Venture::DefaultMaterials Class Reference

Static Public Member Functions

- static Material ∗ **UnlitWhite** ()
- static Material ∗ **UnlitBlue** ()
- static Material ∗ **UnlitRed** ()

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

- E:/Development/Venture/Engine/include/DefaultMaterials.h
- E:/Development/Venture/Engine/src/DefaultMaterials.cpp

4.20 Venture::DefaultMeshes Class Reference

Static Public Member Functions

- static Mesh ∗ **GetCube** ()

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

- E:/Development/Venture/Engine/include/DefaultMeshes.h
- E:/Development/Venture/Engine/src/DefaultMeshes.cpp

4.21 Venture::DefaultShaders Class Reference

Static Public Member Functions

- static VertexShader ∗ **VertexUnlit** ()
- static PixelShader ∗ **PixelUnlit** ()

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

- E:/Development/Venture/Engine/include/DefaultShaders.h

4.22 Venture::Direct3DManager Class Reference

Public Member Functions

- **Direct3DManager** (const Direct3DManager &)=delete
- Direct3DManager & **operator=** (const Direct3DManager &)=delete
- int **Init** (HWND window)
- void **Present** ()
- void **ClearBuffer** (float red, float green, float blue)
- void **DrawMeshMaterial** (Mesh ∗mesh, Material ∗material, DirectX::XMFLOAT4X4 worldTransform)
- void **UpdateViewTransform** (DirectX::XMFLOAT4X4 newTransform)
- void **UpdateProjectionTransform** (DirectX::XMFLOAT4X4 newTransform)
- void **UpdateConstBufferPerFrameData** ()
- void **UpdateConstBufferPerFrame** ()
- void **UpdateConstBufferResizeData** ()
- void **UpdateConstBufferResize** ()

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

- E:/Development/Venture/Engine/include/Direct3DManager.h
- E:/Development/Venture/Engine/src/Direct3DManager.cpp

4.23 Venture::Event Class Reference

Inheritance diagram for Venture::Event:

```
                           ┌──────────────────┐
                           │   Venture::Event  │
                           └──────────────────┘
          ┌─────────────────────┬─────────────────────────┐
┌────────────────────────┐ ┌───────────────────────────┐ ┌──────────────────────┐
│ Venture::KeyPressedEvent│ │ Venture::KeyReleasedEvent │ │ Venture::MouseEvent  │
└────────────────────────┘ └───────────────────────────┘ └──────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::LeftMousePressedEvent    │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::LeftMouseReleasedEvent   │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MiddleMousePressedEvent  │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MiddleMouseReleasedEvent │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MouseDeltaEvent          │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MouseEnterEvent          │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MouseLeaveEvent          │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MouseMoveEvent           │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MouseScrollDownEvent     │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::MouseScrollUpEvent       │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::RightMousePressedEvent   │
                                                  └──────────────────────────────────┘
                                                  ┌──────────────────────────────────┐
                                                  │ Venture::RightMouseReleasedEvent  │
                                                  └──────────────────────────────────┘
```

Public Member Functions

- virtual EventType **getType** ()

Protected Member Functions

- **Event** (EventType type)

Protected Attributes

- EventType **m_type**

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

- E:/Development/Venture/Engine/include/Event.h

4.24 Venture::EventHandler Class Reference

Public Member Functions

- virtual void **Handle** (Event ∗event)=0

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

- E:/Development/Venture/Engine/include/EventHandler.h

4.25 Venture::EventSystem Class Reference

Static Public Member Functions

- static void **DispatchEvents** ()
- static void **Dispatch** ([Event](#) ∗event)
- static void **RegisterHandler** ([EventHandler](#) ∗handler, EventType type)
- static void **Enqueue** ([Event](#) ∗)
- static [Event](#) ∗ **Dequeue** ()

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

- E:/Development/Venture/Engine/include/EventSystem.h
- E:/Development/Venture/Engine/src/EventSystem.cpp

4.26 Venture::FileSystem Class Reference

Static Public Member Functions

- static [File::AsyncOpenRequest](#) ∗ **AsyncOpenFile** (std::string path, std::string mode, void(∗func)()=[](){})
- static [File::AsyncReadRequest](#) ∗ **AsyncReadFile** (int fileHandle, [Buffer](#) inputBuffer, size_t bufferSize, void(∗func)()=[](){})
- static [File::AsyncReadFullRequest](#) ∗ **AsyncReadFullFile** (int fileHandle, [Buffer](#) inputBuffer, void(∗func)()=[](){})
- static [File::AsyncWriteRequest](#) ∗ **AsyncWriteFile** (int fileHandle, [Buffer](#) outputBuffer, size_t bufferSize, void(∗func)()=[](){})
- static [File::AsyncCloseRequest](#) ∗ **AsyncCloseFile** (int fileHandle, void(∗func)()=[](){})
- static [File::AsyncOpenReadCloseRequest](#) ∗ **AsyncOpenReadCloseFile** (std::string path, std::string mode, void(∗func)()=[](){})
- static void **ProcessRequests** ()
- static void **Terminate** ()
- static void **Enqueue** ([File::AsyncRequest](#) ∗)
- static [File::AsyncRequest](#) ∗ **Dequeue** ()

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

- E:/Development/Venture/Engine/include/FileSystem.h
- E:/Development/Venture/Engine/src/FileSystem.cpp

4.27 Venture::FPSCamera Class Reference

Inheritance diagram for Venture::FPSCamera:
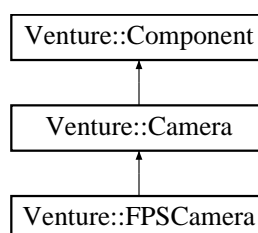
Public Member Functions

- **FPSCamera** (GameObject ∗parent)
- DirectX::XMFLOAT4X4 **GetViewTransform** () override
- void **Update** () override

Public Attributes

- MouseDeltaEventHandler **m_mouseDeltaEventHandler**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/FPSCamera.h
- E:/Development/Venture/Engine/src/FPSCamera.cpp

4.28   Venture::GameObject Class Reference

Public Member Functions

- void **AddComponent** (Component ∗component)
- void **Update** ()
- void **EarlyUpdate** ()
- void **LateUpdate** ()
- void **Destroy** ()
- Transform ∗ **GetTransform** ()

Static Public Member Functions

- static GameObject ∗∗ **GetAllGameObjects** ()
- static int **GetMaxGameObjects** ()
- static GameObjectHandle **Create** ()

Friends

- class **GameObjectHandle**

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

- E:/Development/Venture/Engine/include/GameObject.h
- E:/Development/Venture/Engine/src/GameObject.cpp

4.29   Venture::GameObjectHandle Class Reference

Public Member Functions

- **GameObjectHandle** (GameObject &object)
- GameObject ∗ **Get** ()

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

- E:/Development/Venture/Engine/include/GameObject.h
- E:/Development/Venture/Engine/src/GameObject.cpp

4.30   Venture::Input Class Reference

Static Public Member Functions

- static void **Init** ()
- static KeyPressedEvent ∗ **KeyPressed** (Keyboard::KeyCode)
- static KeyReleasedEvent ∗ **KeyReleased** (Keyboard::KeyCode)
- static MouseMoveEvent ∗ **MouseMove** (int x, int y)
- static MouseEnterEvent ∗ **MouseEnter** ()
- static MouseLeaveEvent ∗ **MouseLeave** ()
- static LeftMousePressedEvent ∗ **LeftMousePressed** (int x, int y)
- static LeftMouseReleasedEvent ∗ **LeftMouseReleased** (int x, int y)
- static RightMousePressedEvent ∗ **RightMousePressed** (int x, int y)
- static RightMouseReleasedEvent ∗ **RightMouseReleased** (int x, int y)
- static MiddleMousePressedEvent ∗ **MiddleMousePressed** (int x, int y)
- static MiddleMouseReleasedEvent ∗ **MiddleMouseReleased** (int x, int y)
- static MouseDeltaEvent ∗ **MouseDelta** (int x, int y)

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

- E:/Development/Venture/Engine/include/Input.h
- E:/Development/Venture/Engine/src/Input.cpp

4.31   Venture::InputLayout Class Reference

Public Member Functions

- **InputLayout** (const D3D11_INPUT_ELEMENT_DESC ∗layoutDesc, size_t numElements)
- void **Create** (ID3D11Device ∗device, Shader ∗shader)
- void **Bind** (ID3D11DeviceContext ∗context)
- bool **IsLoaded** ()

Static Public Member Functions

- static const D3D11_INPUT_ELEMENT_DESC ∗ **VertexLayout1** ()

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

- E:/Development/Venture/Engine/include/InputLayout.h
- E:/Development/Venture/Engine/src/InputLayout.cpp

4.32   Venture::Keyboard Class Reference

Public Types

- enum class **KeyCode** {
  Unassigned , **LeftMouse** , **RightMouse** , **MiddleMouse** ,
  A , **B** , **C** , **D** ,
  E , **F** , **G** , **H** ,
  I , **J** , **K** , **L** ,
  M , **N** , **O** , **P** ,
  Q , **R** , **S** , **T** ,
  U , **V** , **W** , **X** ,
  Y , **Z** , **Zero** , **One** ,
  Two , **Three** , **Four** , **Five** ,
  Six , **Seven** , **Eight** , **Nine** ,
  Backspace , **Tab** , **Enter** , **Shift** ,
  Ctrl , **Alt** , **Escape** , **Space** ,
  LeftArrow , **UpArrow** , **RightArrow** , **DownArrow** }

Static Public Member Functions

- static KeyCode **ConvertWindowsKeyCode** (int keyCode)
- static bool **IsButtonPressed** (KeyCode keyCode)
- static void **Init** ()

Static Public Attributes

- static KeyPressedEventHandler **keyPressedHandler**
- static KeyReleasedEventHandler **keyReleasedHandler**
- static const int **NUM_KEY_CODES** = 52
- static bool **buttonStates** [NUM_KEY_CODES] = { false }

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

- E:/Development/Venture/Engine/include/Keyboard.h
- E:/Development/Venture/Engine/src/Keyboard.cpp

4.33 Venture::KeyPressedEvent Class Reference

Inheritance diagram for Venture::KeyPressedEvent:

```
┌─────────────────────────┐
│     Venture::Event      │
└─────────────────────────┘
             ▲
┌─────────────────────────┐
│ Venture::KeyPressedEvent │
└─────────────────────────┘
```
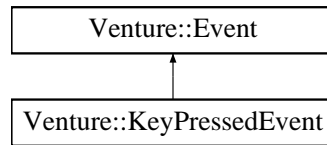
Public Member Functions

- **KeyPressedEvent** (Keyboard::KeyCode keyCode)

Public Attributes

- Keyboard::KeyCode **m_keyCode**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/KeyEvent.h

4.34 Venture::KeyReleasedEvent Class Reference

Inheritance diagram for Venture::KeyReleasedEvent:

```
┌─────────────────────────┐
│     Venture::Event      │
└─────────────────────────┘
             ▲
┌──────────────────────────┐
│ Venture::KeyReleasedEvent │
└──────────────────────────┘
```

Public Member Functions

- **KeyReleasedEvent** (Keyboard::KeyCode keyCode)

Public Attributes

- Keyboard::KeyCode **m_keyCode**

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/KeyEvent.h

4.35 Venture::LeftMousePressedEvent Class Reference

Inheritance diagram for Venture::LeftMousePressedEvent:

Public Member Functions

- **LeftMousePressedEvent** (int x, int y)

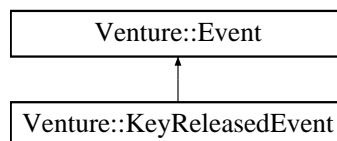**Additional Inherited Members**

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.36 Venture::LeftMouseReleasedEvent Class Reference

Inheritance diagram for Venture::LeftMouseReleasedEvent:

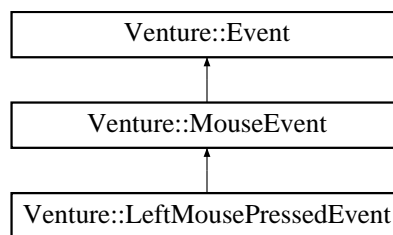**Public Member Functions**

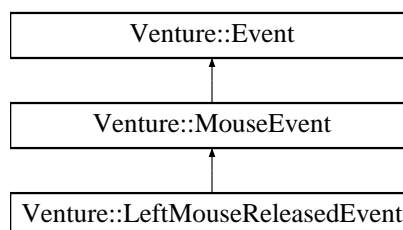- **LeftMouseReleasedEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.37   Venture::Material Class Reference
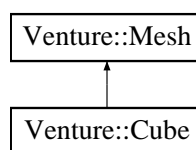
Public Member Functions

- **Material** (DirectX::XMFLOAT4 color)
- bool **ShadersLoaded** ()
- void **CreateShaders** (ID3D11Device ∗device)
- void **BindShaders** (ID3D11DeviceContext ∗context)
- VertexShader ∗ **GetVertexShader** ()
- PixelShader ∗ **GetPixelShader** ()
- bool **IsConstantBufferLoaded** ()
- void **CreateConstantBuffer** (ID3D11Device ∗device)
- void **BindConstantBuffer** (ID3D11DeviceContext ∗context)
- void **UpdateConstantBufferData** (DirectX::XMFLOAT4X4 world)
- void **UpdateConstantBuffer** (ID3D11DeviceContext ∗context)
- bool **IsInputLayoutLoaded** ()
- void **CreateInputLayout** (ID3D11Device ∗device)
- void **BindInputLayout** (ID3D11DeviceContext ∗context)

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

- E:/Development/Venture/Engine/include/Material.h
- E:/Development/Venture/Engine/src/Material.cpp

4.38   Venture::Mesh Class Reference

Inheritance diagram for Venture::Mesh:

Public Member Functions

- **Mesh** (std::vector< Vertex > vertices, std::vector< int > indices)
- void **CreateBuffers** (ID3D11Device ∗device)
- bool **IsLoaded** ()
- void **BindBuffers** (ID3D11DeviceContext ∗context)
- void **DestroyBuffers** ()
- int **NumVertices** ()
- int **NumIndices** ()

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

- E:/Development/Venture/Engine/include/Mesh.h
- E:/Development/Venture/Engine/src/Mesh.cpp

4.39   Venture::MeshInstance Class Reference

Inheritance diagram for Venture::MeshInstance:

```
┌─────────────────────────┐
│   Venture::Component     │
└─────────────────────────┘
             ▲
             │
┌─────────────────────────┐
│  Venture::MeshInstance   │
└─────────────────────────┘
```
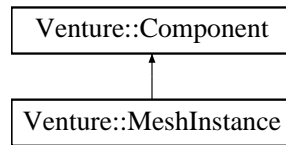
Public Member Functions

- **MeshInstance** (GameObject ∗parent, Mesh ∗mesh, Material ∗material)
- void **Update** () override

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MeshInstance.h
- E:/Development/Venture/Engine/src/MeshInstance.cpp

4.40   Venture::MiddleMousePressedEvent Class Reference

Inheritance diagram for Venture::MiddleMousePressedEvent:

```
┌─────────────────────────────────────┐
│            Venture::Event            │
└─────────────────────────────────────┘
                   ▲
                   │
┌─────────────────────────────────────┐
│          Venture::MouseEvent         │
└─────────────────────────────────────┘
                   ▲
                   │
┌─────────────────────────────────────┐
│   Venture::MiddleMousePressedEvent   │
└─────────────────────────────────────┘
```

Public Member Functions

- **MiddleMousePressedEvent** (int x, int y)

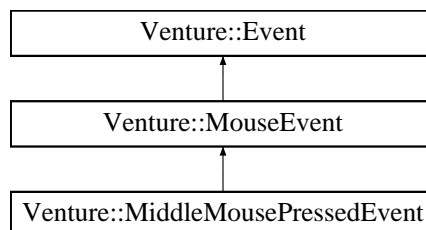### Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.41 Venture::MiddleMouseReleasedEvent Class Reference

Inheritance diagram for Venture::MiddleMouseReleasedEvent:

```
┌─────────────────────────────────┐
│        Venture::Event           │
└─────────────────────────────────┘
                 ↑
┌─────────────────────────────────┐
│      Venture::MouseEvent        │
└─────────────────────────────────┘
                 ↑
┌─────────────────────────────────┐
│ Venture::MiddleMouseReleasedEvent│
└─────────────────────────────────┘
```

Public Member Functions

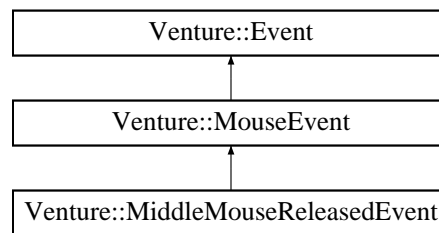- **MiddleMouseReleasedEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.42 Venture::Mouse Class Reference

Static Public Member Functions

- static void **Init** ()
- static bool **IsMouseInWindow** ()
- static void **MouseScrolled** (int x, int y, int delta)
- static void **MouseEnterWindow** ()
- static void **MouseLeaveWindow** ()
- static int **GetX** ()
- static int **GetY** ()

Static Public Attributes

- static MouseMoveEventHandler **mouseMoveHandler**
- static LeftMousePressedEventHandler **leftMousePressedHandler**
- static LeftMouseReleasedEventHandler **leftMouseReleasedHandler**
- static RightMousePressedEventHandler **rightMousePressedHandler**
- static RightMouseReleasedEventHandler **rightMouseReleasedHandler**
- static MiddleMousePressedEventHandler **middleMousePressedHandler**
- static MiddleMouseReleasedEventHandler **middleMouseReleasedHandler**
- static MouseScrollUpEventHandler **mouseScrollUpHandler**
- static MouseScrollDownEventHandler **mouseScrollDownHandler**
- static MouseEnterEventHandler **mouseEnterHandler**
- static MouseLeaveEventHandler **mouseLeaveHandler**

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

- E:/Development/Venture/Engine/include/Mouse.h
- E:/Development/Venture/Engine/src/Mouse.cpp

4.43 Venture::MouseDeltaEvent Class Reference

Inheritance diagram for Venture::MouseDeltaEvent:

```
┌─────────────────────────┐
│     Venture::Event      │
└─────────────────────────┘
            ▲
            │
┌─────────────────────────┐
│   Venture::MouseEvent   │
└─────────────────────────┘
            ▲
            │
┌─────────────────────────┐
│ Venture::MouseDeltaEvent│
└─────────────────────────┘
```
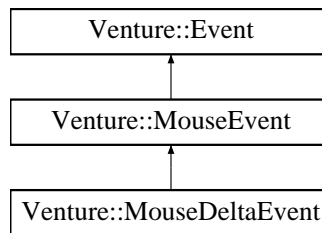
Public Member Functions
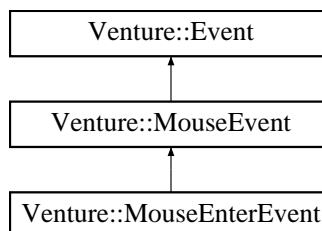
- **MouseDeltaEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.44 Venture::MouseEnterEvent Class Reference

Inheritance diagram for Venture::MouseEnterEvent:

```
┌─────────────────────────┐
│     Venture::Event      │
└─────────────────────────┘
            ▲
            │
┌─────────────────────────┐
│   Venture::MouseEvent   │
└─────────────────────────┘
            ▲
            │
┌─────────────────────────┐
│ Venture::MouseEnterEvent│
└─────────────────────────┘
```
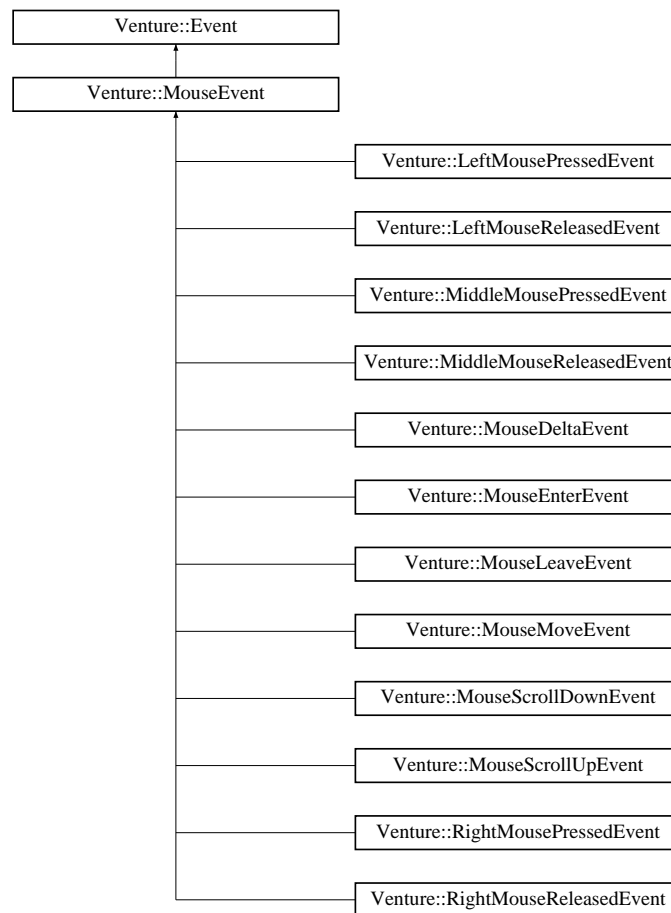
Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.45 Venture::MouseEvent Class Reference

Inheritance diagram for Venture::MouseEvent:

Public Member Functions

- std::pair< int, int > **GetPosition** ()

Protected Member Functions

- **MouseEvent** (EventType type, int x, int y)
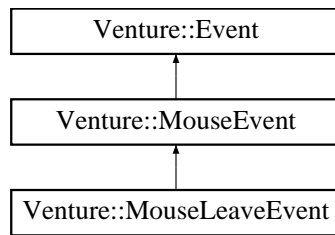- **MouseEvent** (EventType type)

Protected Attributes

- int **m_x**
- int **m_y**

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.46 Venture::MouseLeaveEvent Class Reference

Inheritance diagram for Venture::MouseLeaveEvent:

```
┌─────────────────────────┐
│     Venture::Event      │
└─────────────────────────┘
             ▲
             │
┌─────────────────────────┐
│   Venture::MouseEvent   │
└─────────────────────────┘
             ▲
             │
┌─────────────────────────┐
│ Venture::MouseLeaveEvent│
└─────────────────────────┘
```
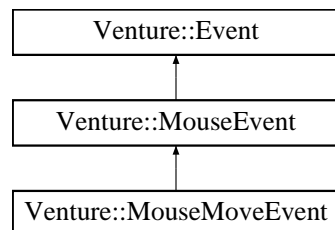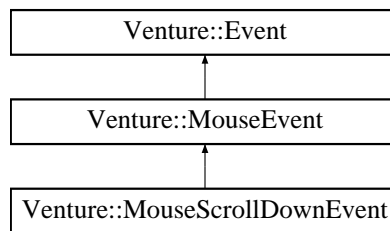
Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.47 Venture::MouseMoveEvent Class Reference

Inheritance diagram for Venture::MouseMoveEvent:

```
┌─────────────────────────┐
│     Venture::Event      │
└─────────────────────────┘
             ▲
             │
┌─────────────────────────┐
│   Venture::MouseEvent   │
└─────────────────────────┘
             ▲
             │
┌─────────────────────────┐
│ Venture::MouseMoveEvent │
└─────────────────────────┘
```

Public Member Functions

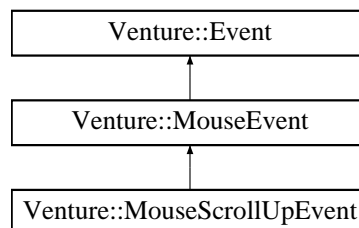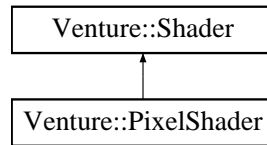- **MouseMoveEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.48 Venture::MouseScrollDownEvent Class Reference

Inheritance diagram for Venture::MouseScrollDownEvent:

```
┌────────────────────────────────┐
│        Venture::Event          │
└────────────────────────────────┘
                ▲
┌────────────────────────────────┐
│      Venture::MouseEvent       │
└────────────────────────────────┘
                ▲
┌────────────────────────────────┐
│ Venture::MouseScrollDownEvent  │
└────────────────────────────────┘
```

Public Member Functions

- **MouseScrollDownEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.49 Venture::MouseScrollUpEvent Class Reference

Inheritance diagram for Venture::MouseScrollUpEvent:

```
┌────────────────────────────────┐
│        Venture::Event          │
└────────────────────────────────┘
                ▲
┌────────────────────────────────┐
│      Venture::MouseEvent       │
└────────────────────────────────┘
                ▲
┌────────────────────────────────┐
│  Venture::MouseScrollUpEvent   │
└────────────────────────────────┘
```

Public Member Functions

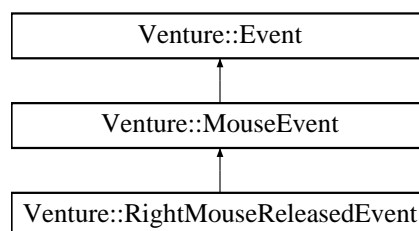- **MouseScrollUpEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.50 Venture::PixelShader Class Reference

Inheritance diagram for Venture::PixelShader:

```
┌─────────────────────┐
│   Venture::Shader    │
└─────────────────────┘
           ▲
           │
┌─────────────────────┐
│ Venture::PixelShader │
└─────────────────────┘
```

Public Member Functions

- **PixelShader** (std::string path)
- void **Create** (ID3D11Device ∗device) override
- void **Bind** (ID3D11DeviceContext ∗context) override
- bool **IsLoaded** () override

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/PixelShader.h
- E:/Development/Venture/Engine/src/PixelShader.cpp

4.51 Venture::RenderManager Class Reference

Public Member Functions

- int **Init** (HWND window)
- void **Render** ()

Static Public Member Functions

- static void **UpdateViewTransform** (DirectX::XMFLOAT4X4 newTransform)
- static void **UpdateProjectionTransform** (DirectX::XMFLOAT4X4 newTransform)
- static void **Submit** (Mesh ∗, Material ∗, DirectX::XMFLOAT4X4 worldTransform)
- static void **Clear** ()

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

- E:/Development/Venture/Engine/include/RenderManager.h
- E:/Development/Venture/Engine/src/RenderManager.cpp

4.52 Venture::RightMousePressedEvent Class Reference

Inheritance diagram for Venture::RightMousePressedEvent:

```
┌─────────────────────────────────┐
│        Venture::Event           │
└─────────────────────────────────┘
                 ▲
┌─────────────────────────────────┐
│      Venture::MouseEvent        │
└─────────────────────────────────┘
                 ▲
┌─────────────────────────────────┐
│ Venture::RightMousePressedEvent │
└─────────────────────────────────┘
```
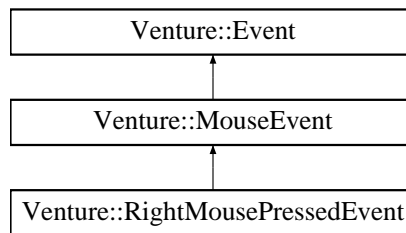
Public Member Functions

- **RightMousePressedEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.53 Venture::RightMouseReleasedEvent Class Reference

Inheritance diagram for Venture::RightMouseReleasedEvent:

```
┌──────────────────────────────────┐
│        Venture::Event            │
└──────────────────────────────────┘
                 ▲
┌──────────────────────────────────┐
│      Venture::MouseEvent         │
└──────────────────────────────────┘
                 ▲
┌──────────────────────────────────┐
│ Venture::RightMouseReleasedEvent │
└──────────────────────────────────┘
```

Public Member Functions

- **RightMouseReleasedEvent** (int x, int y)

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/MouseEvent.h

4.54   Venture::Semaphore Class Reference

Public Member Functions

- **Semaphore** (int initialCount)
- void **Wait** ()
- void **Signal** ()

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

- E:/Development/Venture/Engine/include/Semaphore.h

4.55   Venture::Shader Class Reference

Inheritance diagram for Venture::Shader:
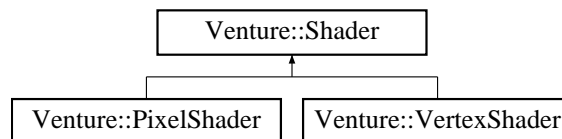
Public Member Functions

- void **ReadFile** ()
- void ∗ **GetBytecode** ()
- size_t **GetBytecodeSize** ()

Protected Member Functions

- **Shader** (ShaderType type, std::string path)
- virtual void **Create** (ID3D11Device ∗device)=0
- virtual void **Bind** (ID3D11DeviceContext ∗context)=0
- virtual bool **IsLoaded** ()=0

Protected Attributes

- ShaderType **m_type**
- Buffer **m_bytecode**
- std::string **m_path**

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

- E:/Development/Venture/Engine/include/Shader.h
- E:/Development/Venture/Engine/src/Shader.cpp

4.56 Venture::Time Class Reference

Static Public Member Functions

- static double **NewDelta** ()
- static double **DeltaTime** ()
- static void **Init** ()
- static double **CurrentTime** ()
- static double **FixedTimeStep** ()

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

- E:/Development/Venture/Engine/include/Time.h
- E:/Development/Venture/Engine/src/Time.cpp

4.57 Venture::Transform Class Reference

Inheritance diagram for Venture::Transform:
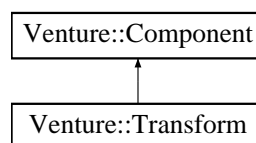
Public Member Functions

- **Transform** ([GameObject](#) *parent)
- **Transform** ([GameObject](#) *parent, DirectX::XMFLOAT3 position)
- void **Update** ()
- void **EarlyUpdate** ()
- void **LateUpdate** ()
- DirectX::XMFLOAT3 **GetPos** ()
- DirectX::XMFLOAT4 **GetRot** ()
- DirectX::XMFLOAT3 **GetScale** ()
- DirectX::XMFLOAT4X4 **ObjectToWorld** ()

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/Transform.h

4.58   Venture::Vertex Struct Reference

Public Attributes

- float **x**
- float **y**
- float **z**
- unsigned char **r**
- unsigned char **g**
- unsigned char **b**
- unsigned char **a**

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

- E:/Development/Venture/Engine/include/Vertex.h

4.59   Venture::VertexShader Class Reference

Inheritance diagram for Venture::VertexShader:
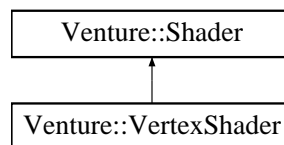
Public Member Functions

- **VertexShader** (std::string path)
- void **Create** (ID3D11Device ∗device) override
- void **Bind** (ID3D11DeviceContext ∗context) override
- bool **IsLoaded** () override

Additional Inherited Members

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

- E:/Development/Venture/Engine/include/VertexShader.h
- E:/Development/Venture/Engine/src/VertexShader.cpp

4.60 Venture::Window Class Reference

Public Member Functions

- int **Init** ()
- int **Create** ()
- int **Destroy** ()
- LRESULT CALLBACK **WindowCallback** (HWND window, UINT msg, WPARAM wParam, LPARAM lParam)
- HWND **GetHandle** ()
- bool **ProcessMessages** ()
- void **GainFocus** ()
- void **LoseFocus** ()
- void **ConfineCursor** ()
- void **FreeCursor** ()
- void **ResizeClipRect** ()

Static Public Member Functions

- static LRESULT CALLBACK **WindowCallbackSetup** (HWND window, UINT msg, WPARAM wParam, LPARAM lParam)
- static LRESULT CALLBACK **WindowCallbackStatic** (HWND window, UINT msg, WPARAM wParam, LPARAM lParam)

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

- E:/Development/Venture/Engine/include/Window.h
- E:/Development/Venture/Engine/src/Window.cpp

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