

# **ArioAMineSweeper**

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Version NotObfuscated  
Mon Mar 29 2021



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## Class List

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# File Index

## File List

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# Class Documentation

## FCoordsT Struct Reference

Simple 2d Coordinate struct Compiler issues due to contrained hardware, could not create proper default operators, It wasn't doing the logical nor arithmetic operations properly in some cases and in other it was just getting errors. Errors of mismatch types and undefined operators, so I decided I had to define some myself, and fix whatever ails my computer later.

```
#include <MineSecret.h>
```

### Public Member Functions

[FCoordsT](#) **operator=** (const [FCoordsT](#) &C2)  
[FCoordsT](#) **operator+** (const [FCoordsT](#) &C2) const  
[FCoordsT](#) **operator-** (const [FCoordsT](#) &C2) const  
[FCoordsT](#) **operator\*** (const [FCoordsT](#) &C2) const  
[FCoordsT](#) **operator/** (const [FCoordsT](#) &C2) const  
[FCoordsT](#) **operator%** (const [FCoordsT](#) &C2) const  
[FCoordsT](#) **operator+=** (const [FCoordsT](#) &C2)  
[FCoordsT](#) **operator-=** (const [FCoordsT](#) &C2)  
[FCoordsT](#) **operator\*=** (const [FCoordsT](#) &C2)  
[FCoordsT](#) **operator/=** (const [FCoordsT](#) &C2)  
[FCoordsT](#) **operator%=>** (const [FCoordsT](#) &C2)  
bool **operator==** (const [FCoordsT](#) &C2) const  
bool **operator!=** (const [FCoordsT](#) &C2) const  
bool **operator<** (const [FCoordsT](#) &C2) const  
bool **operator>** (const [FCoordsT](#) &C2) const  
bool **operator<=** (const [FCoordsT](#) &C2) const  
bool **operator>=** (const [FCoordsT](#) &C2) const

### Public Attributes

uint16 X  
uint16 Y

---

### Detailed Description

Simple 2d Coordinate struct Compiler issues due to contrained hardware, could not create proper default operators, It wasn't doing the logical nor arithmetic operations properly in some cases and in other it was just getting errors. Errors of mismatch types and undefined operators, so I decided I had to define some myself, and fix whatever ails my computer later.

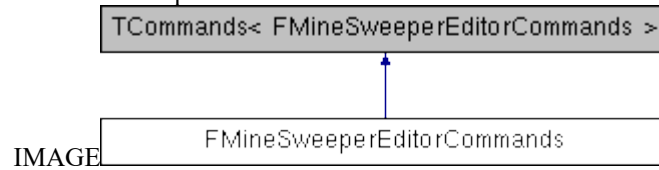
---

The documentation for this struct was generated from the following file:  
MineSweeperEditor/Public/[MineSecret.h](#)



## FMineSweeperEditorCommands Class Reference

Inheritance diagram for FMineSweeperEditorCommands:



### Public Member Functions

virtual void **RegisterCommands** () override

### Public Attributes

TSharedPtr< FUICommandInfo > **WindowContext**

---

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

MineSweeperEditor/Public/[MineSweeperEditorCommands.h](#)

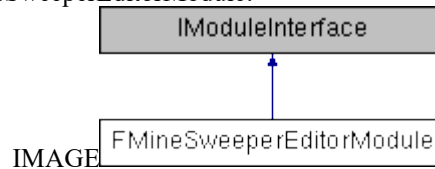
MineSweeperEditor/Private/[MineSweeperEditorCommands.cpp](#)

## FMineSweeperEditorModule Class Reference

Minesweeper Editor-module.

```
#include <MineSweeperEditor.h>
```

Inheritance diagram for FMineSweeperEditorModule:



### Public Member Functions

[FMineSweeperEditorModule](#) ()

*FMineSweeperEditorModule* constructor.

virtual void [StartupModule](#) () override

*StatupModule - IModuleInterface override.*

virtual void [ShutdownModule](#) () override

*Shutdown - IModuleInterface override.*

void [TabBtnClicked](#) () const

*Brings up main plugin window.*

void [CommittedX](#) (const uint8 NewInt, ETextCommit::Type CommitType) const

*Commit value from slider.*

void [CommittedY](#) (const uint8 NewInt, ETextCommit::Type CommitType) const

*Commit text from text-box 1 to value.*

void [RegenerateGrid](#) (uint8 Xin, uint8 Yin, TSharedRef< class SUniformGridPanel >) const

*Regenerates an already existing Slate Grid.*

### Public Attributes

TSharedPtr< [FSysManager](#) > [SysManager](#)

*System Manager.*

---

### Detailed Description

Minesweeper Editor-module.

This is the editor module which is responsible for initializing slate elements. (That regards the related editor window and it's elements)

---

## Constructor & Destructor Documentation

### FMineSweeperEditorModule::FMineSweeperEditorModule ()

[FMineSweeperEditorModule](#) constructor.

Creates a [FSysManager](#) and loads total saved score

---

## Member Function Documentation

### void FMineSweeperEditorModule::CommittedX (const uint8 *NewInt*, ETextCommit::Type *CommitType*) const

Commit value from slider.

Commits value to this->SysManager->NextRowSize, is bound to an SSlider which is defined in OnSpawnTab

#### Parameters

<i>NewInt</i>	New display value
<i>CommitType</i>	

#### Note

set value when keyboard input

### void FMineSweeperEditorModule::CommittedY (const uint8 *NewInt*, ETextCommit::Type *CommitType*) const

Commit text from text-box 1 to value.

#### Parameters

<i>NewInt</i>	New display value
<i>CommitType</i>	

#### Note

set value when keyboard input

### void FMineSweeperEditorModule::RegenerateGrid (uint8 *Xin*, uint8 *Yin*, TSharedRef< class SUniformGridPanel > ) const

Regenerates an already existing Slate Grid.

#### Parameters

<i>Xin</i>	Maximum size X
<i>Yin</i>	Maximum size Y

#### Note

FSLocal - Local container to create and bind function

FSLocal::OnTileClick(const Coords, TSharedPtr<FSysManager>)

FSLocal::MakeTile(const Coords, TSharedPtr<FSysManager>)

#### Returns

Shared reference of Grid panel, type: TSharedRef<SUniformGridPanel>

**void FMineSweeperEditorModule::ShutdownModule () [override], [virtual]**

Shutdown - IModuleInterface override.

De-initializes the style-set and command, as-well as triggers SaveState in [FSysManager](#), then de-registers callback and the new tab in the editor menu.

**void FMineSweeperEditorModule::StartupModule () [override], [virtual]**

StatupModule - IModuleInterface override.

Initializes the style-set and command, then registers callback and the new tab in the editor menu.

**void FMineSweeperEditorModule::TabBtnClicked () const**

Brings up main plugin window.

Tries to invoke tab through FGlobalTabmanager:: and then Triggers the New Game event

**Note**

This function will be bound to Command

---

**Member Data Documentation**

**TSharedPtr<[FSysManager](#)> FMineSweeperEditorModule::SysManager**

System Manager.

A shared pointer to an [FSysManager](#), which manages much of the game and the system functionality.

In contrast to [FMineSweeperEditorModule](#), which mainly is used for initializing the visual elements, as-well as binding them through [FTileBinder](#).

---

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

MineSweeperEditor/Public/[MineSweeperEditor.h](#)

MineSweeperEditor/Private/[MineSweeperEditor.cpp](#)

## FMineSweeperEditorStyle Class Reference

```
#include <MineSweeperEditorStyle.h>
```

### Public Member Functions

```
template<EBtnStyles BtnStyle> TSharedRef< FSlateStyleSet > CreateBtn ()
```

### Static Public Member Functions

```
static void Init ()  
static void Shutdown ()  
static void ReloadTextures ()  
static const ISlateStyle & Get ()  
static FName GetName ()
```

---

### Detailed Description

MineSweeper button Slate Style

---

### Member Function Documentation

**const ISlateStyle & FMineSweeperEditorStyle::Get () [static]**

reloads textures used by slate renderer

**FName FMineSweeperEditorStyle::GetName () [static]**

#### Returns

The Slate style set

---

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

MineSweeperEditor/Public/[MineSweeperEditorStyle.h](#)  
MineSweeperEditor/Private/[MineSweeperEditorStyle.cpp](#)

## FSysManager Class Reference

General resource and game manager.

```
#include <FSysManager.h>
```

### Public Types

```
enum EGameDifficulty : uint8 { Easy = 0x0, Normal = 0x1, Hard = 0x2, Insane = 0x3 }
```

*Public member enums.*

```
enum EGameState : uint8 { L = 0x0, W = 0x1, P = 0x2 }
```

*Game-state enum @type EGameState : uint8.*

```
enum EBitField : uint8 { IsMine = 0x0, IsClicked = 0x1, HasFlag = 0x2, HasQuestion = 0x3,  
NeighbourMines = 0x4 }
```

*Data-field enum @type EBitField : uint8.*

```
enum EPrivateMember : uint8 { BoolPlayAgain = 0x0, VectorSlateGrid = 0x1, VectorDifficultyList  
= 0x2, VectorTileDisplayGrid = 0x3, TOptGridWidgetRef = 0x4, STextStatsRef = 0x5,  
STextScoreRef = 0x6 }
```

*Private-member-name enum @type EPrivateMember : uint8.*

### Public Member Functions

```
FSysManager ()
```

*[FSysManager](#) constructor.*

```
void InitBtnSBrush ()
```

*Setting the FSlateImageBrushes with actual images.*

```
void UpdateScoreWidget ()
```

*Updating Score Widget.*

```
TOptional< uint16 > DisplayColSize () const
```

*Displays Column Size for widget.*

```
TOptional< uint16 > DisplayRowSize () const
```

*Displays Row Size for widget.*

```
void RowSizeCommitted (float NewRowSize)
```

*Assigns 'NewRowSize' to this->NextRowSize.*

```
void ColSizeCommitted (float NewColSize)
```

*Assigns 'NewColSize' to this->NextColSize.*

```
void UpdateGridSize ()
```

*Updates Grid Size variables.*

```
TSharedRef< SButton > GetGridFSlot (FCoords TileCoords)
```

*Get reference to specific Slate SUniformGridPanel::FSlot.*

```
TSharedRef< STextBlock > GetTileTextBlock (FCoords TileCoords)
```

*Get reference to specific Slate Text Block.*

[EGameState ClickTile](#) (const [FCoords](#) TileCoords)  
*Click Tile.*

template<EBitField BitField> uint8 [GetAttributes](#) (const [FCoords](#) TileCoords) const  
*Get [FSysManager](#) Attributes.*

template<EBitField BitField> void [SetAttributes](#) (const [FCoords](#) TileCoords, const uint8 Fieldval)  
*Set [FSysManager](#) Attributes.*

template<EPrivateMember PrivateMember> auto [GetPrivateMemberRef](#) () -> auto &  
*Get [FSysManager](#) Private Member References.*

void [SaveState](#) () const  
*Save session scores.*

void [LoadState](#) ()  
*Loads saved score.*

void [ResetGame](#) ()  
*Reset game / end game Pretty self-explanatory.*

void [RestartGame](#) ()  
*Restart game / end game Pretty self-explanatory.*

void [FSetNextDiff](#) (EGameDifficulty NextDiff)  
*Updates NextDifficulty Variable.*

### Public Attributes

TSharedPtr< FSlateImageBrush > **FlagBrush**  
TSharedPtr< FSlateImageBrush > **QuestionBrush**  
TSharedPtr< FSlateImageBrush > **BombBrush**  
uint16 **FreeTilesCount** = 0x0  
uint16 **ClickedTiles** = 0x0  
uint16 **CurrRowSize** = 0x5  
uint16 **CurrColSize** = 0x5  
uint16 **Wins** = 0x0  
uint16 **Losses** = 0x0  
std::array< std::array< uint8, Gmax\_Size >, Gmax\_Size > [GridData](#) = {0}  
*Grid Data array.*

### Static Public Attributes

static constexpr uint16 **Gmax\_Size** = 0x40

---

## Detailed Description

General resource and game manager.

Is the general Systems and Game manager. It enforces the rules for the game, loads/saves total win/loss, And it interacts with the Slate-widgets on the game-windows

---

## Member Enumeration Documentation

enum [FSysManager::EGameDifficulty](#) : uint8

Public member enums.

Game-difficulty enum @type EGameDifficulty : uint8

---

## Constructor & Destructor Documentation

**FSysManager::FSysManager ()**

[FSysManager](#) constructor.

Loads some FString into a TArray<FString>, then constructing some shared pointers to some of [FSysManager](#) members

---

## Member Function Documentation

[FSysManager::EGameState](#) **FSysManager::ClickTile (const [FCoords](#) TileCoords)**

Click Tile.

### Parameters

<i>TileCoords</i>	Coordinato to tile to be clicked
-------------------	----------------------------------

**void FSysManager::ColSizeCommitted (float NewColSize)**

Assigns 'NewColSize' to this->NextColSize.

Is used to bind to an STextBlock through .Text\_Raw()

### Parameters

<i>NewColSize</i>	
-------------------	--

**Optional< uint16 > FSysManager::DisplayColSize () const**

Displays Column Size for widget.

Is used to bind to an SNumericEntryBox through .Value()

### Returns

Optional<uint16> Optional type which holds, if anything, a uint16.



## **TOptional< uint16 > FSysManager::DisplayRowSize () const**

Displays Row Size for widget.

Is used to bind to an SNumericEntryBox through .Value()

### **Returns**

TOptional<uint16> Optional type which holds, if anything, a uint16.

## **template<FSysManager::EBitField BitField> uint8 FSysManager::GetAttributes (const [FCoords](#) [TileCoords](#)) const**

Get [FSysManager](#) Attributes.

Templated attributes getter/setter functions

### **Parameters**

<i>TileCoords</i>	Struct with coords for tile to change attribute value in
-------------------	--

### **Template Parameters**

<i>BitField</i>	Enum of type <a href="#">FSysManager::EBitField</a> Which is an enum that has fields for each attribute
-----------------	---

## **TSharedRef< SButton > FSysManager::GetGridFSlot ([FCoords](#) [TileCoords](#))**

Get reference to specific Slate SUniformGridPanel::FSlot.

### **Parameters**

<i>TileCoords</i>	Position struct, x & y coordinates
-------------------	------------------------------------

## **template<FSysManager::EPrivateMember PrivateMember> auto FSysManager::GetPrivateMemberRef**

Get [FSysManager](#) Private Member References.

### **Template Parameters**

<i>PrivateMember</i>	Enum of type <a href="#">FSysManager::EPrivateMember</a> Which is an enum that has fields for several of FSysManagers private members
----------------------	---

### **Returns**

-> auto&, Returns reference to given private member

## **TSharedRef< STextBlock > FSysManager::GetTileTextBlock ([FCoords](#) [TileCoords](#))**

Get reference to specific Slate Text Block.

### **Parameters**

<i>TileCoords</i>	Position struct, x & y coordinates
-------------------	------------------------------------

## **void FSysManager::LoadState ()**

Loads saved score.

**Note**

Loads score from file, in plugin/MineSweeperEditor/Resources/data/ If directory/file do not exist, then it will not load any data into the total score.

**void FSysManager::RowSizeCommitted (float *NewRowSize*)**

Assigns 'NewRowSize' to this->NextRowSize.

Is used to bind to an STextBlock through .Text\_Row()

**void FSysManager::SaveState () const**

Save session scores.

**Note**

Saves sessions score to file, in plugin/MineSweeperEditor/Resources/data/ If directory does not exist, then it will be created.

**template<FSysManager::EBitField BitField> void FSysManager::SetAttributes (const [FCoords](#) *TileCoords*, const uint8 *Fieldval*)**

Set [FSysManager](#) Attributes.

**Parameters**

<i>TileCoords</i>	Struct with coords for tile to change attribute value in
<i>Fieldval</i>	Actual value to be set in the attribute bit-field

**Template Parameters**

<i>BitField</i>	Parameter is an enum of type EBitField. Which is an enum that has fields for each attribute
-----------------	---

**void FSysManager::UpdateGridSize ()**

Updates Grid Size variables.

Updates the members CurrRowSize and CurrColSize. Assigns them the values of NextRowSize & NextColSize.

**void FSysManager::UpdateScoreWidget ()**

Updating Score Widget.

Updates the STextBlock widget, which is used for scores with current Wins/Losses.

## Member Data Documentation

**`std::array<std::array<uint8, Gmax_Size>, Gmax_Size> FSysManager::GridData = {0}`**

Grid Data array.

### Note

64^2 bytes = 4kb, on a mcu it would be unacceptable, on a pc cpu with megabytes of cache it's negligible

Per element:

bit[0] = isMine?

bit[1] = Clicked?

bit[2] = HasFlag?

bit[3] = HasQuestionMark?

bits[7,4] = Neighbour Mines Count

Don't be scared by the notation above; as this does not regard actual bitfields but instead regard values, and uses bit operators to access these "fields", thus it is still a fully portable solution

---

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

MineSweeperEditor/Public/[FSysManager.h](#)

MineSweeperEditor/Private/[FSysManager.cpp](#)

MineSweeperEditor/Private/[MineSweeperEditor.cpp](#)

## FTileBinder Struct Reference

Function binder.

```
#include <MineSweeperEditor.h>
```

### Static Public Member Functions

static FReply [NewGameBind](#) (const [FMineSweeperEditorModule](#) \*Owner, TSharedPtr< [FSysManager](#) > Manager)

*New Game event.*

static FReply [RestartGameBind](#) (const [FMineSweeperEditorModule](#) \*Owner, TSharedPtr< [FSysManager](#) > Manager)

*Restart Board event.*

static FReply [OnDifficultyClick](#) ([FSysManager::EGameDifficulty](#) Difficulty, TSharedPtr< [FSysManager](#) > ManagerShared)

*OnTileClick, function to bind to game-board tiles.*

static FReply [OnTileClick](#) ([FCoords](#) TileCoords, TSharedPtr< [FSysManager](#) > ManagerShared)

*OnTileClick, function to bind to game-board tiles.*

static TSharedRef< SWidget > [MakeTile](#) (const [FCoords](#) TileCoords, TSharedPtr< [FSysManager](#) > ManagerShared)

*Make Tile and bind OnClick to it.*

---

### Detailed Description

Function binder.

End of [FMineSweeperEditorModule](#) class

Implements functions which are then used to bind to delegates in [FMineSweeperEditorModule](#)

---

### Member Function Documentation

TSharedRef< SWidget > FTileBinder::MakeTile (const [FCoords](#) TileCoords, TSharedPtr< [FSysManager](#) > ManagerShared) [static]

Make Tile and bind OnClick to it.

#### Parameters

<i>TileCoords</i>	Given coordinates at which I tile will be created
<i>ManagerShared</i>	<a href="#">FSysManager</a> pointer to pass through to internal function call

#### Returns

TSharedRef<SWidget>, a shared reference to the tile ([SAButton](#) widget)

**FReply FTileBinder::NewGameBind (const [FMineSweeperEditorModule](#) \* *Owner*,  
TSharedPtr< [FSysManager](#) > *Manager*)[static]**

New Game event.

Starts a new game, uses the slider values to generate new board-dimensions.

#### Parameters

<i>Owner</i>	
<i>Manager</i>	@retun returns an FReply::Handled() when finished.

**FReply FTileBinder::OnDifficultyClick ([FSysManager::EGameDifficulty](#) *Difficulty*,  
TSharedPtr< [FSysManager](#) > *ManagerShared*)[static]**

OnTileClick, function to bind to game-board tiles.

#### Parameters

<i>Difficulty</i>	Requested Difficulty Setting
<i>ManagerShared</i>	An <a href="#">FSysManager</a> to trigger it's ClickTile() function @retun returns an FReply::Handled() when finished.

**FReply FTileBinder::OnTileClick ([FCoords](#) *TileCoords*, TSharedPtr< [FSysManager](#) >  
*ManagerShared*)[static]**

OnTileClick, function to bind to game-board tiles.

#### Parameters

<i>TileCoords</i>	Coordinates of the tile which has been clicked
<i>ManagerShared</i>	An <a href="#">FSysManager</a> to trigger it's ClickTile() function @retun returns an FReply::Handled() when finished.

**FReply FTileBinder::RestartGameBind (const [FMineSweeperEditorModule](#) \* *Owner*,  
TSharedPtr< [FSysManager](#) > *Manager*)[static]**

Restart Board event.

Restart the current game. can one be used once per board you're playing.

#### Parameters

<i>Owner</i>	
<i>Manager</i>	@retun returns an FReply::Handled() when finished.

---

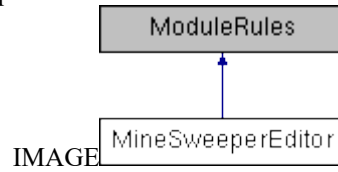
**The documentation for this struct was generated from the following files:**

MineSweeperEditor/Public/[MineSweeperEditor.h](#)

MineSweeperEditor/Private/[MineSweeperEditor.cpp](#)

## MineSweeperEditor Class Reference

Inheritance diagram for MineSweeperEditor:



### Public Member Functions

**MineSweeperEditor** (ReadOnlyTargetRules Target)

---

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

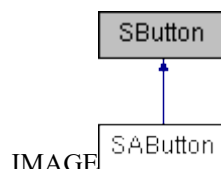
MineSweeperEditor/MineSweeperEditor.Build.cs

## SAButton Class Reference

SButton child class.

```
#include <SAButton.h>
```

Inheritance diagram for SAButton:



### Public Member Functions

```
void ExecOnClick (const FPointerEvent &MouseEvent, FReply &Reply, FKey &LastPressButton)
void ExecOnRelease (const FGeometry &MyGeometry, const FPointerEvent &MouseEvent, FReply
    &Reply, EButtonClickMethod::Type InputClickMethod, FKey &LastPressButton)
bool MustBePressed (EButtonClickMethod::Type InputClickMethod)
FReply RMBExecuteBound ()
FReply LMBExecuteBound ()
virtual FReply OnMouseButtonDown (const FGeometry &MyGeometry, const FPointerEvent
    &MouseEvent) override
virtual FReply OnMouseButtonUp (const FGeometry &MyGeometry, const FPointerEvent
    &MouseEvent) override
virtual FReply OnMouseButtonDoubleClick (const FGeometry &InMyGeometry, const
    FPointerEvent &InMouseEvent) override
```

### Public Attributes

```
FOnClicked OnClicked
FOnClicked OnRMBClicked
FOnClicked OnLMBClicked
```

---

### Detailed Description

SButton child class.

Overloads some functions like OnClick to differentiate between LMB and RMB

---

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

```
MineSweeperEditor/Public/SAButton.h
MineSweeperEditor/Private/SAButton.cpp
```

# File Documentation

## MineSweeperEditor/Private/FSysManager.cpp File Reference

```
#include "FSysManager.h"  
#include "EditorReimportHandler.h"  
#include "Misc/FileHelper.h"  
#include "Widgets/Layout/SUniformGridPanel.h"  
#include "Interfaces/IPluginManager.h"  
#include "Brushes/SlateImageBrush.h"
```

### Macros

```
#define LOCTEXT_NAMESPACE "MineSweeperEditorModule"
```

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test



## MineSweeperEditor/Private/MineSweeperEditor.cpp File Reference

```
#include "MineSweeperEditor.h"
#include "EditorReimportHandler.h"
#include "MineSweeperEditorStyle.h"
#include "MineSweeperEditorCommands.h"
#include "LevelEditor.h"
#include "Widgets/Docking/SDockTab.h"
#include "Widgets/Layout/SWrapBox.h"
#include "Widgets/Views/SListView.h"
#include "Widgets/Layout/SUniformGridPanel.h"
#include "Widgets/Input/SNumericEntryBox.h"
#include "Widgets/Text/STextBlock.h"
#include "Templates/SharedPointer.h"
#include "Misc/FileHelper.h"
#include "Interfaces/IPluginManager.h"
#include "Slate/SlateTextures.h"
#include "ToolMenus.h"
#include "Widgets/Input/SSlider.h"
#include "Widgets/Layout/SGridPanel.h"
#include "Widgets/Layout/SScrollBox.h"
```

### Macros

```
#define LOCTEXT_NAMESPACE "MineSweeperEditorModule"
```

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test

## MineSweeperEditor/Private/ MineSweeperEditorCommands.cpp File Reference

```
#include "MineSweeperEditorCommands.h"
```

### Macros

```
#define LOCTEXT_NAMESPACE "FMineSweeperEditorModule"
```

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test

## MineSweeperEditor/Private/MineSweeperEditorStyle.cpp File Reference

```
#include "MineSweeperEditorStyle.h"
#include "Styling/SlateStyleRegistry.h"
#include "Framework/Application/SlateApplication.h"
#include "Slate/SlateGameResources.h"
#include "Interfaces/IPluginManager.h"
```

### Macros

```
#define IMAGE_BRUSH(RelativePath, ...) FSlateImageBrush( Style->RootToContentDir( RelativePath, TEXT(".png") ), __VA_ARGS__ )
#define BOX_BRUSH(RelativePath, ...) FSlateBoxBrush( Style->RootToContentDir( RelativePath, TEXT(".png") ), __VA_ARGS__ )
#define BORDER_BRUSH(RelativePath, ...) FSlateBorderBrush( Style->RootToContentDir( RelativePath, TEXT(".png") ), __VA_ARGS__ )
#define TTF_FONT(RelativePath, ...) FSlateFontInfo( Style->RootToContentDir( RelativePath, TEXT(".ttf") ), __VA_ARGS__ )
#define OTF_FONT(RelativePath, ...) FSlateFontInfo( Style->RootToContentDir( RelativePath, TEXT(".otf") ), __VA_ARGS__ )
```

### Functions

```
const FVector2D Icon16x16 (16.0f, 16.0f)
const FVector2D Icon20x20 (20.0f, 20.0f)
const FVector2D Icon40x40 (40.0f, 40.0f)
```

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test

## MineSweeperEditor/Public/FSysManager.h File Reference

```
#include "CoreMinimal.h"
#include "Modules/ModuleManager.h"
#include "MineSecret.h"
#include <array>
#include <vector>
```

### Classes

class [FSysManager](#)

*General resource and game manager.*

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test

## MineSweeperEditor/Public/MineSecret.h File Reference

#defines and [FCoordsT](#) definition

### Classes

struct [FCoordsT](#)

*Simple 2d Coordinate struct Compiler issues due to constrained hardware, could not create proper default operators, It wasn't doing the logical nor arithmetic operations properly in some cases and in other it was just getting errors. Errors of mismatch types and undefined operators, so I decided I had to define some myself, and fix whatever ails my computer later.*

### Macros

```
#define FREETILES FreeTilesCount - ClickedTiles
#define MAKEROBOTO(FontSize) .Font(FSlateFontInfo(FPaths::EngineContentDir() /
    TEXT("Slate/Fonts/Roboto-Bold.ttf"), FontSize))
#define ROBOTOARG(FontSize) (FSlateFontInfo(FPaths::EngineContentDir() /
    TEXT("Slate/Fonts/Roboto-Bold.ttf"), FontSize))
#define MAKETEXT(InString) .Text(FText::FromString( InString ))
#define TEXTARG(InString) (FText::FromString( InString ))
#define MAKENUMTEXT(InInt) .Text(FText::FromString( FString::FromInt(InInt)))
#define NUMTEXTARG(InInt) (FText::FromString( FString::FromInt(InInt)))
```

### Typedefs

using FCoords = [FCoordsT](#)

---

### Detailed Description

#defines and [FCoordsT](#) definition

### Author

Ario Amin @project MineSweeper Geodesic Test

---

### Macro Definition Documentation

**#define FREETILES FreeTilesCount - ClickedTiles**

#### Note

\FREETILES is ONLY to be used within member functions of class [FSysManager](#)

**#define MAKENUMTEXT( InInt) .Text(FText::FromString( FString::FromInt(InInt)))**

#### Note

\INT\_TEXT is ONLY to be used Slate widgets that, when created through SNew(), have the member function .Text(...) as-well as an integer to read as text

```
#define MAKEROBOTO( FontSize) .Font(FSlateFontInfo(FPaths::EngineContentDir() /  
TEXT("Slate/Fonts/Roboto-Bold.ttf"), FontSize))
```

**Note**

\MAKEROBOTO is ONLY to be used Slate widgets that, when created through SNew(), have the member function .Font(...)

```
#define MAKETEXT( InString) .Text(FText::FromString( InString ))
```

**Note**

\MAKETEXT is ONLY to be used Slate widgets that, when created through SNew(), have the member function .Text(...)

## MineSweeperEditor/Public/MineSweeperEditor.h File Reference

```
#include "CoreMinimal.h"
#include "FSysManager.h"
#include "Modules/ModuleManager.h"
```

### Classes

class [FMineSweeperEditorModule](#)  
*Minesweeper Editor-module.*

struct [FTileBinder](#)  
*Function binder.*

---

### Detailed Description

### Author

Ario Amin @project Minesweeper Geodesic Test

## MineSweeperEditor/Public/MineSweeperEditorCommands.h

### File Reference

```
#include "CoreMinimal.h"
#include "Framework/Commands/Commands.h"
#include "MineSweeperEditorStyle.h"
```

### Classes

class [FMineSweeperEditorCommands](#)

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test



## MineSweeperEditor/Public/MineSweeperEditorStyle.h File Reference

```
#include "CoreMinimal.h"
#include "Styling/SlateStyle.h"
```

### Classes

class [FMineSweeperEditorStyle](#)

### Enumerations

```
enum class EBtnStyles : uint8 { BtnFlag, BtnQ, BtnBomb, BtnInt }
```

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test

## MineSweeperEditor/Public/SAButton.h File Reference

```
#include "Widgets/Input/SButton.h"  
#include "FSysManager.h"
```

### Classes

class [SAButton](#)

*SButton child class.*

---

### Detailed Description

### Author

Ario Amin @project MineSweeper Geodesic Test

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