

# UECasts.com - UE5 C++ Cheat Sheet

UPROPERTY	UPROPERTY(VisibleAnywhere, Category='Player')
BlueprintAssignable	Multicast Delegates only. Exposes property for assigning in Blueprints
BlueprintCallable	Multicast Delegates only. Property exposed for calling in Blueprints
BlueprintReadOnly	Readable from blueprints, but not writeable
BlueprintReadWrite	Read or writeable from blueprints
Category	Category of the property. Nested categories with   operator
EditAnywhere	Can be edited by property windows, on archetypes & instances
EditDefaultsOnly	Edited by property windows, but only on archetypes
EditFixedSize	Prevent changing the length of an array (useful for dynamic arrays)
EditInstanceOnly	Edited by property windows, but only on instances, not on archetypes
Transient	Should not be saved, zero-filled at load time
VisibleAnywhere	Visible in property windows, but can't be edited at all
VisibleDefaultsOnly	Visible in property windows for archetypes, & can't be edited
VisibleInstanceOnly	Visible in property windows for instances, not archetypes, & can't be edited

TypeName	Prefix	Example
<b>AActor</b>	A	AActor AFpsCharacter;
<b>Boolean</b>	b	bool bIsTeaDelicious;
<b>Enums</b>	E	enum EPlayerType
<b>float</b>		float TeaWeight;
<b>FName</b>	F	FName TeaName;
<b>FString</b>	F	FString TeaFriendlyName;
<b>int32</b>		int32 TeaCount;
<b>Interfaces</b>	I	INetworkConnection;
<b>Struct</b>	F	FStruct FPlayerStats;
<b>SWidget</b>	S	SWidget SMyWidget;
<b>Type</b>	T	TArray<FMyType> FArrayOfMyTypes;
<b>UClass</b>	U	UClass* TeaClass;
<b>UObject</b>	U	UCameraComponent * ThirdPersonCam
<b>USoundCue</b>	U	USoundCue* TeaSound;
<b>UTexture</b>	U	UTexture* TeaTexture;

UFUNCTION	UFUNCTION(BlueprintCallable, Category = Power)
BlueprintAuthorityOnly	Will not execute from Blueprint code if running on something without network authority
BlueprintCallable	Can be executed in a Blueprint or Level Blueprint graph
BlueprintCosmetic	Is cosmetic and will not run on dedicated servers
BlueprintImplementableEvent	Can be overridden in a Blueprint or Level Blueprint graph
BlueprintNativeEvent	Designed to be overridden by a Blueprint, but also has a native implementation
BlueprintPure	Does not affect the owning object in any way and can be executed in a Blueprint or Level Blueprint graph
Category	Category of the function. Nested categories with pipe   operator
Client	Only executed on the client that owns the Object the function belongs to
Exec	Can be executed from the in-game console
NetMulticast	Executed locally on the server and replicated to all clients, regardless of the Actor's NetOwner
Reliable	Replicated over the network, and is guaranteed to arrive regardless of bandwidth or network errors
Server	Only executed on the server
Unreliable	Replicated over the network but can fail due to bandwidth limitations or network errors

Common Base Classes	
<b>Actor</b>	An Actor is an object that can be placed or spawned in the world.
<b>Actor Component</b>	An ActorComponent is a reusable component that can be added to any actor.
<b>Character</b>	A Character is a Pawn that includes the ability to walk, run, jump, and more.
<b>Game Mode</b>	A Game Mode defines the game being played, its rules, scoring, and other faces of the game type. Eg: Capture The Flag, DeathMatch, etc
<b>Game State</b>	The Game State manages the information that is used for all connected clients and is specific to the Game Mode. Eg: Time Remaining, current score, etc.
<b>Pawn</b>	A Pawn is an Actor that can be controlled and receive input from a Controller.
<b>Player Controller</b>	A Player Controller is an Actor responsible for controlling a Pawn used by the player.
<b>Scene Component</b>	Component that has a scene transform (location, rotation, scale) and can be attached to other scene components.