

# UECasts.com - UE5 C++ Cheat Sheet

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

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

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;

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.