



Configuration ... Unreal Engine HealthSystemActor.cpp HealthSystemActor.h

```
Blueprints
1 // Fill out your copyright notice in the Description page of Project Settings.
2
3 #pragma once
4
5 #include "CoreMinimal.h"
6 #include "GameFramework/Actor.h"
7 #include "HealthSystemActor.generated.h"
8
9 UCLASS()
10 class BLUEPRINTS_API AHealthSystemActor : public AActor
11 {
12     GENERATED_BODY()
13
14 public:
15     // Sets default values for this actor's properties
16     AHealthSystemActor();
17
18 protected:
19     // Called when the game starts or when spawned
20     virtual void BeginPlay() override;
21
22 public:
23     // Called every frame
24     virtual void Tick(float DeltaTime) override;
25     // Salud actual
26     UPROPERTY(EditAnywhere, BlueprintReadWrite, Category = "Stats")
27         Cambiado en Blueprints
28         float CurrentHealth;
29
30     // Salud maxima
31     UPROPERTY(EditAnywhere, BlueprintReadWrite, Category = "Stats")
32         Cambiado en Blueprints
33         float MaxHealth;
34
35     // Volumen de la curacion
36     UPROPERTY(EditAnywhere, BlueprintReadWrite, Category = "Stats")
37         Cambiado en Blueprints
38         float HealAmount;
39
40     // Multiplicador de defensa
41     UPROPERTY(EditAnywhere, BlueprintReadWrite, Category = "Stats")
42         Cambiado en Blueprints
43         float DefenseFactor;
44
45     // Operaciones
46
47     // Suma
48     UFUNCTION(BlueprintCallable, Category = "Operations")
49         0 referencias de Blueprint
50         void IncreaseHealth();
51
52     // Resta
53     UFUNCTION(BlueprintCallable, Category = "Operations")
54         0 referencias de Blueprint
55         void DecreaseHealth(float DamageAmount);
56
57     // Multiplicar
58     UFUNCTION(BlueprintCallable, Category = "Operations")
59         0 referencias de Blueprint
60         void DoubleMaxHealth();
61
62     // Dividir
63     UFUNCTION(BlueprintCallable, Category = "Operations")
64         0 referencias de Blueprint
65         void CalculateReducedDamage(float IncomingDamage);
66
67     };
68 }
```

Configuración ... Unreal Engine HealthSystemActor.cpp HealthSystemActor.h

Blueprints AHealthSystemActor

```

5   // Sets default values
6   AHealthSystemActor::AHealthSystemActor()
7   {
8       // Set this actor to call Tick() every frame. You can turn this off to improve performance if you don't need it.
9       PrimaryActorTick.bCanEverTick = true;
10      CurrentHealth = 100.0f;
11      MaxHealth = 100.0f;
12      HealAmount = 20.0f;
13      DefenseFactor = 2.0f;
14  }
15
16
17     // Called when the game starts or when spawned
18     void AHealthSystemActor::BeginPlay()
19     {
20         Super::BeginPlay();
21         UE_LOG(LogTemp, Warning, TEXT("---- INICIO EJERCICIO 6 ----"));
22
23         // Llamamos a las funciones
24         IncreaseHealth();
25         DecreaseHealth(30.0f);
26         DoubleHealth();
27         CalculateReducedDamage(50.0f);
28
29         UE_LOG(LogTemp, Warning, TEXT("---- FIN EJERCICIO 6 ----"));
30
31     }
32
33
34     // Called every frame
35     void AHealthSystemActor::Tick(Float DeltaTime)
36     {
37         Super::Tick(DeltaTime);
38     }
39
40
41     // SUMAR
42     void AHealthSystemActor::IncreaseHealth()
43     {
44         CurrentHealth += HealAmount;
45         UE_LOG(LogTemp, Warning, TEXT("SUMA: La salud ha aumentado a %f"), CurrentHealth);
46     }
47
48     // RESTAR
49     void AHealthSystemActor::DecreaseHealth(Float DamageAmount)
50     {
51         CurrentHealth -= DamageAmount;
52         UE_LOG(LogTemp, Warning, TEXT("RESTA: La salud se ha reducido a %f"), CurrentHealth);
53     }
54
55     // MULTIPLICAR
56     void AHealthSystemActor::DoubleHealth()
57     {
58         MaxHealth = MaxHealth * 2.0f;
59         UE_LOG(LogTemp, Warning, TEXT("MULTIPLICAR: La salud maxima ahora es %f"), MaxHealth);
60     }
61
62     // DIVIDIR
63     void AHealthSystemActor::CalculateReducedDamage(Float IncomingDamage)
64     {
65         if (DefenseFactor != 0.0f)
66         {
67             float RealDamage = IncomingDamage / DefenseFactor;
68             UE_LOG(LogTemp, Warning, TEXT("DIVIDIR: El dano que se ha recibido %f se reduce a %f"), IncomingDamage, RealDamage);
69         }
70     }

```

```

LogTemp: Warning: --- INICIO EJERCICIO 6 ---
LogTemp: Warning: SUMA: La salud ha aumentado a 120.000000
LogTemp: Warning: RESTA: La salud se ha reducido a 90.000000
LogTemp: Warning: MULTIPLICAR: La salud maxima ahora es 200.000000
LogTemp: Warning: DIVIDIR: El dano que se ha recibido 50.000000 se reduce a 25.000000
LogTemp: Warning: --- FIN EJERCICIO 6 ---

```