Show the finished project

Create a C++ class for pickup object (Actor class)

Create a blueprint class of the same by adding a blueprint class.

If you add to world you cannot see. No visual representation.

You can add components in blueprint window. But we will add through C++

So

in the header file add following to protected

UPROPERTY(VisibleAnyWhere, Category = "Component")

UStaticMeshComponent\* MeshComp;

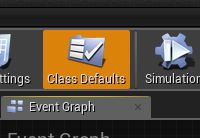
UPROPERTY(VisibleAnyWhere, Category = "Component")

USphereComponent\* SphereComp;

UPROPERTY(EditDefaultsOnly, Category = "Effects")

UParticleSystem\* PicksupFX;

forward declaration required for USphereComponent. So add "class USphereComponent;" at start.

effects visible only in class defaults. Look for static mesh and sphere components 

Now to C++ file

add following to the constructor of C++ file

MeshComp = CreateDefaultSubobject<UStaticMeshComponent>(TEXT("MeshComp"));

RootComponent = MeshComp;

SphereComp = CreateDefaultSubobject<USphereComponent>(TEXT("SphereComp"));

SphereComp->SetupAttachment(MeshComp);

need to include following

#include "Components/SphereComponent.h"

#include "Components/StaticMeshComponent.h"

and go to unreal to see change to fpsobjective class. Add a sphere to the static mesh.

next adding collision to spherecomponent and disable collision in static mesh in C++

change the script to the following

MeshComp = CreateDefaultSubobject<UStaticMeshComponent>(TEXT("MeshComp"));

MeshComp->SetCollisionEnabled(ECollisionEnabled::NoCollision);

RootComponent = MeshComp;

SphereComp = CreateDefaultSubobject<USphereComponent>(TEXT("SphereComp"));

SphereComp->SetCollisionEnabled(ECollisionEnabled::QueryOnly);

SphereComp->SetCollisionResponseToAllChannels(ECR\_Ignore);

SphereComp->SetCollisionResponseToChannel(ECC\_Pawn, ECR\_Overlap );

SphereComp->SetupAttachment(MeshComp);

Collision should be working

Now how to add particle effect when colliding.

Create function in header file

void PlayEffects();

Go to implementation in C++ file

add #include "Kismet/GameplayStatics.h"

add PlayEffects(); to begin play

add implementation as below.

void AFPSObjectiveActor::PlayEffects()

{

UGameplayStatics::SpawnEmitterAtLocation(this, PicksupFX, GetActorLocation());

}

We should be able to get the effects in editor. (pick a particle effect in class defaults)

So to see the particle effect when player overlap the actor

add following method declaration to header file (can comment out the playeffect() in beginplay method)

virtual void NotifyActorBeginOverlap(AActor\* OtherActor);

then add following definition to C++ file.

void AFPSObjectiveActor::NotifyActorBeginOverlap(AActor\* OtherActor)

{

Super::NotifyActorBeginOverlap(OtherActor);

PlayEffects();

}

Exercise:

When player moves away destroy the actor.

(Note: Emitter will note be destroyed.)

Answer

void AFPSObjectiveActor::NotifyActorEndOverlap(AActor \* OtherActor)

{

Destroy();

}