**Introduction to Unreal Engine CPP**

Create a Basic C++ project file

Create a C++ actor class “FloatingActor”

Explain header and cpp files.

add UE\_LOG to BeginPlay

***UE\_LOG(LogTemp, Warning, TEXT("Hello World!!!"));***

Add CPP actor to the world

Try on Tick

Create a BP version of the actor

Open BP and add a static mesh

**Creating Variables that are accessible in BP Version**

Add in Header file.

***float StepSize = 2.0f;***

To expose to editor add following before it

***UPROPERTY(VisibleAnywhere, Category = "Testing")***

Create another variable

***FVector NewLoc;***

No need to expose it to editor.

Add following to the cpp file

***StepSize += 2.0f;***

***NewLoc.Z = StepSize;***

***SetActorLocation(NewLoc);***

Add another UE\_LOG at end

***UE\_LOG(LogTemp, Warning, TEXT("New location is %s"), \*NewLoc.ToString());***

**Exercise:**

Create a FRotator and set the rotation of the actor while its drifting. (It will be NewRotator.Yaw or pitch or roll)

**Adding Explosion**

In the actor header file

***UPROPERTY(EditDefaultsOnly, Category = "FX")***

***UParticleSystem\* ExplosionEffect;***

Forward declaration required. So do the following at the beginning.

***class UParticleSystem;***

do following in cpp file

***#include “GameplayStatics.h”***

***UGameplayStatics::SpawnEmitterAtLocation(GetWorld(), ExplosionEffect, GetActorLocation());***