**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

NewLoc = GetActorLocation();

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());

**Exposing Functions**

UFUNCTION(BlueprintCallable, Category = "Game")

void DriftLeft(float MoveSize);

Add function implementation as follows

void AFloatingActor::DriftLeft(float MoveSize=500.0f)

{

FVector CurrentLoc = GetActorLocation();

CurrentLoc.Y = MoveSize;

SetActorLocation(CurrentLoc);

UE\_LOG(LogTemp, Warning, TEXT("this is a warning"));

}

**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\* ParticleEffect;

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

class UParticleSystem;

do following in cpp file

#include "Kismet/GameplayStatics.h"

UGameplayStatics::SpawnEmitterAtLocation(GetWorld(), ParticleEffect, GetActorLocation());