C++ : Launch를 이용한 부스트 발판

마리오 카트에서 무지개 발판을 만들 때 사용했음

ACharacter::LaunchCharacter

#include "GameFramework/Character.h"

```cpp
virtual void LaunchCharacter
(
    FVector LaunchVelocity,
    bool bXYOverride,
    bool bZOverride
)
```

speedBoard.cpp

```cpp
void AMiniGameSpeedBoard::OnMyCompBeginOverlap(UPrimitiveComponent* OverlappedComponent, AActor* OtherActor, UP
{
    // 만약 OtherActor가 플레이어라면
    auto player = Cast<AKartPlayer>(OtherActor);
    if (player)
        player->speedUp();
}

void AMiniGameSpeedBoard::OnMyCompEndOverlap(UPrimitiveComponent* OverlappedComponent, AActor* OtherActor,
    UPrimitiveComponent* OtherComp, int32 OtherBodyIndex)
{
    auto player = Cast<AKartPlayer>(OtherActor);
    if (player)
        player->speedDown();
}
```

player.h

```cpp
int32 StarCount;  //@ unchanged m asc

public:
    UFUNCTION()
    void speedUp();

    UFUNCTION()
    void speedDown();


    bool bSpeedUp;
    float currentTime;
    float speedUpTime = 1;
```

player.cpp

```cpp
void AKartPlayer::speedUp()
{
    bSpeedUp = true;
    currentTime = 0;
    UE_LOG(LogTemp, Warning, TEXT("speed up"));

}

void AKartPlayer::speedDown()
{
    UE_LOG(LogTemp, Warning, TEXT("speed down"));
    bSpeedUp = false;
    //GetCharacterMovement()->Velocity = GetCharacterMovement()->Velocity * 0.5f;

}
```

speedUp이 실행되면 Launch가 앞으로 더 밀어줌!!

혹시 EndOverlap 안될 시 방지하려고 2초 뒤에 speedDown 실행하게함

```cpp
// Called every frame
void AKartPlayer::Tick(float DeltaTime)
{
    Super::Tick(DeltaTime);
    MainUI->SetStarCount();

    if (bSpeedUp)
    {
        currentTime += GetWorld()->GetDeltaSeconds();

        LaunchCharacter(GetActorForwardVector() * 5000, true, true);

        if (currentTime > speedUpTime)
        {
            speedDown();
        }
    }
}
```