

Part 15 - Collision Events

In order for the game to be won by the hero by collecting the star, we need to create a Physics Event Handler in code to check for, and to process a collision between those two objects.

We can declare one at the bottom of the Init() function:

```
orxEvt_AddHandler(ORX_EVENT_TYPE_PHYSICS, PhysicsEventHandler);
```

What this means is, every time there is a physics event like a collision, execute the PhysicsEventHandler function. We don't have one of these, so you can add one:

```
ORX_STATUS ORX_FASTCALL PhysicsEventHandler(const ORX_EVENT *_pstEvent)
{
    return ORX_STATUS_SUCCESS;
}
```

The type of event we are interested in for collisions is the ORX_PHYSICS_EVENT_CONTACT_ADD.

Add this code inside the new function:

```
if (_pstEvent->eID == ORX_PHYSICS_EVENT_CONTACT_ADD) {
    ORX_OBJECT *pstRecipientObject, *pstSenderObject;

    pstSenderObject = orxObject(_pstEvent->hSender);
    pstRecipientObject = orxObject(_pstEvent->hRecipient);

    ORX_STRING senderObjectName =
    (ORX_STRING)orxObject_GetName(pstSenderObject);
    ORX_STRING recipientObjectName =
    (ORX_STRING)orxObject_GetName(pstRecipientObject);

    if (orxString_Compare(senderObjectName, "StarObject") == 0){
        //do something
    }

    if (orxString_Compare(recipientObjectName, "StarObject") == 0){
        //do something
    }
}
```

Whenever there is contact between two objects, ORX_PHYSICS_EVENT_CONTACT_ADD is the physics event ID that will trigger. Both the sender object and the recipient object are available to us in the event package.

Next, we can check if the name of either object is "StarObject". And if so, the game will be won.

Replace the "do something" lines with a command that will instantly remove the star from the game:

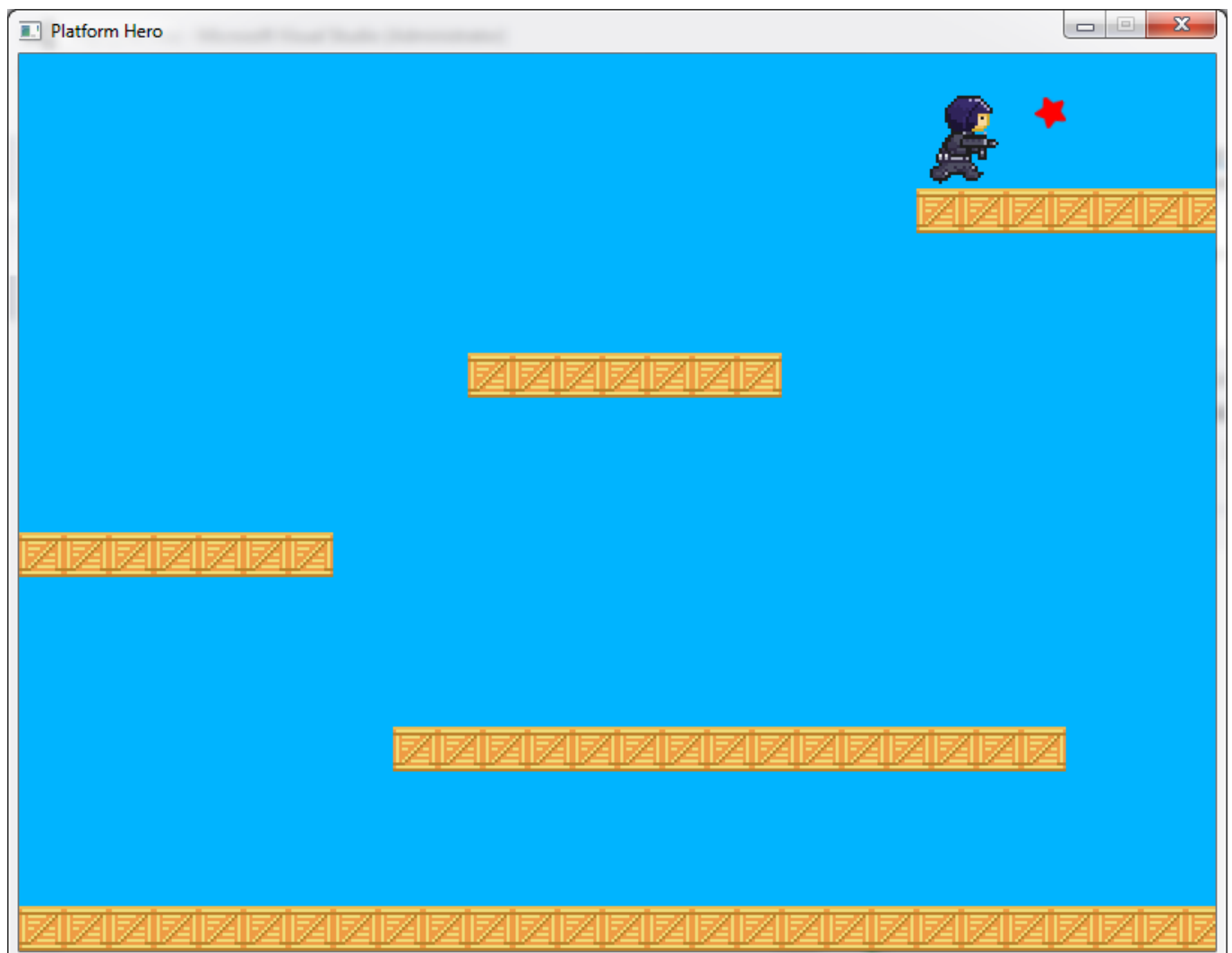
```
if (orxString_Compare(senderObjectName, "StarObject") == 0){  
    orxObject_SetLifeTime(pstSenderObject, 0);  
}  
  
if (orxString_Compare(recipientObjectName, "StarObject") == 0){  
    orxObject_SetLifeTime(pstRecipientObject, 0);  
}
```

The one last thing to add to ensure the collision between the star and the hero works, is to add "star" to the HeroBody check mask:

```
[HeroBodyPart]  
Type      = box  
Solid     = true  
SelfFlags = hero  
CheckMask = platforms # star
```

Checkmasks and flags must work both ways, that is, it must be defined on both object bodies.

Compile and run. Make your way up to the top platform and the star should disappear when the hero touches it:



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