Math: Code Snippets

OrxAABox

OrxMath

Convert an angle in degrees to a directional vector

```
orxFLOAT degRotation = 45;
orxFLOAT radRotation = degRotation * orxMATH_KF_DEG_TO_RAD;

orxFLOAT x = orxMath_Cos(radRotation);
orxFLOAT y = orxMath_Sin(radRotation);
orxVECTOR directionVector = {x, y, 0};
```

OrxOBox

Function to return an object within a boxed area:

```
orxOBJECT* GetObjectInTheArea(){

    orxVECTOR objectPickVector;
    objectPickVector.fX = 878;
    objectPickVector.fY = 1185;
    objectPickVector.fZ = -1.0;
    orxOBOX objectBoxArea;
    orxVECTOR pivot = {0, 0, 0};
    orxVECTOR position;
    position.fX = 834;
    position.fY = 1150;
    position.fZ = -0.1;
    orxVECTOR size;
    size.fX = 21;
    size.fY = 160;
    size.fZ = 1;
    orxOBox_2DSet(&objectBoxArea, &position, &pivot, &size, 0);
    orxU32 objectGroupID = orxCamera_GetGroupID(pstCamera, 1);
    orxOBJECT *objectToFind = orxObject_BoxPick(&objectBoxArea,
objectGroupID);
    return objectToFind;
}
```

OrxVector

Some ways to initialise an empty orxVECTOR.

Avoid this:

```
orxVECTOR position;
```

Rather, do one of these:

```
orxVECTOR position = {0, 0, 0};
```

```
orxVECTOR position = orxVECTOR_0;
```

```
orxVECTOR position;
position.fX = 0;
position.fY = 0;
position.fZ = 0;
```

Uninitialised orxVECTORs can create unintended consequences in your game.

You can also do: