# Monster Hunt Tutorial 1: Basics

## Create a cube and move it

```
#include "DarkGDK.h"

void DarkGDK ( void )
{
	dbSyncOn   ( );
	dbSyncRate ( 60 );
	dbMakeObjectCube(1,100);
	while ( LoopGDK ( ) )
	{
		float aY=dbObjectAngleY(1);
		if(dbUpKey()==1)  dbMoveObject(1,2);
		if(dbLeftKey()==1) aY = dbWrapValue(aY+5);
		if(dbRightKey()==1) aY = dbWrapValue(aY-5);

		dbYRotateObject(1,aY);
		dbSync();
	}
	return;
}
```

## Create 5 cubes and move camera around them

```
void DarkGDK ( void )
{
	dbSyncOn   ( );
	dbSyncRate ( 60 );
	//Create 5 cubes and place randomly
	for(int x = 1;x<=5;x++){
		dbMakeObjectCube(x,100);
		dbPositionObject(x,dbRnd(2000),0,dbRnd(2000));
	}

	while ( LoopGDK ( ) )
	{
		float caY= dbCameraAngleY();

		//Control input for camera movement
		//Camera is facing at a downward angle
		if(dbUpKey()==1) dbMoveCamera(10);
		if(dbLeftKey()==1) dbYRotateCamera(dbWrapValue(caY-5));
		if(dbRightKey()==1) dbYRotateCamera(dbWrapValue(caY+5));

		dbSync();
	}
	return;
}
```

# Place Camera behind player (sphere) and follow it

```
void DarkGDK ( void )
{
	dbSyncOn   ( );
	dbSyncRate ( 60 );
	//Create 5 cubes and place randomly
	for(int x = 1;x<=5;x++){
		dbMakeObjectCube(x,100);
		dbPositionObject(x,dbRnd(2000),0,dbRnd(2000));
	}
	//Make sphere
	dbMakeObjectSphere(10,50);

	while ( LoopGDK ( ) )
	{
		//Store Object angle Y in aY#
		float aY = dbObjectAngleY(10);

		//Control input for camera
		if(dbUpKey()==1) dbMoveObject(10,10);
		if(dbLeftKey()==1) dbYRotateObject(10,dbWrapValue(aY-5));
		if(dbRightKey()==1) dbYRotateObject(10,dbWrapValue(aY+5));

		//Get player object position and store in X# and Z#
		float X = dbObjectPositionX(10);
		float Z = dbObjectPositionZ(10);

		//Get new camera position and store in cZ# and cX#
		float cZ = dbNewZValue(Z,aY-180,100);
		float cX = dbNewXValue(X,aY-180,100);

		//Position camera
		dbPositionCamera(cX,100,cZ);

		//Point the camera at the player object
		dbPointCamera(X,50,Z);

		dbSync();
	}
	return;
}
```

# Collision Detection

```
void DarkGDK ( void )
{
	float X,Z;
	dbSyncOn   ( );
	dbSyncRate ( 60 );
	//Create 5 cubes and place randomly
	for(int x = 1;x<=5;x++){
		dbMakeObjectCube(x,100);
		dbPositionObject(x,dbRnd(2000),0,dbRnd(2000));
		dbSetObjectCollisionToBoxes(x);
	}

	//Make sphere
	dbMakeObjectSphere(10,50);
	dbPositionObject(10,-100,0,-100);
	dbSetObjectCollisionToSpheres(10);


	while ( LoopGDK ( ) )
	{

		//Get player object position and store in X# and Z#
		X = dbObjectPositionX(10);
		Z = dbObjectPositionZ(10);

		//Store Object angle Y in aY#
		float aY = dbObjectAngleY(10);

		//Control input for camera
		if(dbUpKey()==1) dbMoveObject(10,10);
		if(dbLeftKey()==1) dbYRotateObject(10,dbWrapValue(aY-5));
		if(dbRightKey()==1) dbYRotateObject(10,dbWrapValue(aY+5));

		if(dbObjectCollision(10,0)>0) dbPositionObject(10,X,0,Z);

		//Get new camera position and store in cZ# and cX#
		float cZ = dbNewZValue(Z,aY-180,100);
		float cX = dbNewXValue(X,aY-180,100);

		//Position camera
		dbPositionCamera(cX,75,cZ);

		//Point the camera at the player object
		dbPointCamera(X,25,Z);

		dbSync();
	}
```

```
	return;
}
```

## Texturing Objects

```
void DarkGDK ( void )
{
	float X,Z;
	dbSyncOn   ( );
	dbSyncRate ( 60 );
	dbLoadImage("cottage.bmp",1);
	dbLoadImage("barry.bmp",2);
	//Create 5 cubes and place randomly
	for(int x = 1;x<=5;x++){
		dbMakeObjectCube(x,100);
		dbPositionObject(x,dbRnd(2000),0,dbRnd(2000));
		dbSetObjectCollisionToBoxes(x);
		dbTextureObject(x,1);  //Add texture
	}

	//Make sphere
	dbMakeObjectSphere(10,50);
	dbPositionObject(10,-100,0,-100);
	dbSetObjectCollisionToSpheres(10);
	dbTextureObject(10,2);    //Add texture

	while ( LoopGDK ( ) )
	{
		//Get player object position and store in X# and Z#
		X = dbObjectPositionX(10);
		Z = dbObjectPositionZ(10);

		//Store Object angle Y in aY#
		float aY = dbObjectAngleY(10);

		//Control input for camera
		if(dbUpKey()==1) dbMoveObject(10,10);
		if(dbLeftKey()==1) dbYRotateObject(10,dbWrapValue(aY-5));
		if(dbRightKey()==1) dbYRotateObject(10,dbWrapValue(aY+5));

		if(dbObjectCollision(10,0)>0) dbPositionObject(10,X,0,Z);

		//Get new camera position and store in cZ# and cX#
		float cZ = dbNewZValue(Z,aY-180,100);
		float cX = dbNewXValue(X,aY-180,100);

		//Position camera
		dbPositionCamera(cX,75,cZ);

		//Point the camera at the player object
		dbPointCamera(X,25,Z);
```

```
            //Scroll Textures on cubes
            dbScrollObjectTexture(1,0.005,0);
            dbScrollObjectTexture(2,0,0.005);

            //Scale textures on cubes
            dbScaleObjectTexture(3,0.998,0.998);
            dbScaleObjectTexture(4,1.001,1.001);

            dbSync();
      }
      return;
}
```

# References

The Game Creators (2010). Monster Hunt Tutorial . Retrieved, Feb 8, 2010, from: http://developer.thegamecreators.com/?f=t01/3d_tutorial_index