

TAGE

"Dolphin Ride"

(same as 01a, with the following changes)

...

```
public class MyGame extends VariableFrameRateGame
```

```
{ ...
  private GameObject dol, cub;
  private ObjShape dolS, cubS;
  private TextureImage doltx, brick;
  ...
```

```
-----
@Override
```

```
public void loadShapes()
{ dolS = new ImportedModel("dolphinHighPoly.obj");
  cubS = new Cube();
}
```

```
@Override
```

```
public void loadTextures()
{ doltx = new TextureImage("Dolphin_HighPolyUV.png");
  brick = new TextureImage("brick1.jpg");
}
```

```
@Override
```

```
public void buildObjects()
{ ...
  // build cube at the right of the window
  cub = new GameObject(GameObject.root(), cubS, brick);
  initialTranslation = (new Matrix4f()).translation(3,0,0);
  initialScale = (new Matrix4f()).scaling(0.5f);
  cub.setLocalTranslation(initialTranslation);
  cub.setLocalScale(initialScale);
}
```

```
@Override
```

```
public void keyPressed(KeyEvent e)
```

```
{ Vector3f loc, fwd, up, right, newLocation;
  Camera cam;
```

```
switch (e.getKeyCode())
```

```
{ case KeyEvent.VK_1:
  paused = !paused;
  break;
```

```
case KeyEvent.VK_2: // move dolphin forward
```

```
fwd = dol.getWorldForwardVector();
loc = dol.getWorldLocation();
newLocation = loc.add(fwd.mul(.02f));
dol.setLocalLocation(newLocation);
break;
```

```
case KeyEvent.VK_3: // move dolphin backward
```

```
fwd = dol.getWorldForwardVector();
loc = dol.getWorldLocation();
newLocation = loc.add(fwd.mul(-.02f));
dol.setLocalLocation(newLocation);
break;
```

```
case KeyEvent.VK_4: // view from dolphin
```

```
// to "ride" the dolphin, move this code to update()
cam = (engine.getRenderSystem()
        .getViewport("MAIN").getCamera());

loc = dol.getWorldLocation();
fwd = dol.getWorldForwardVector();
up = dol.getWorldUpVector();
right = dol.getWorldRightVector();
cam.setU(right);
cam.setV(up);
cam.setN(fwd);
cam.setLocation(loc.add(up.mul(1.3f)).add(fwd.mul(-2.5f)));
break;
```

```
}
```

```
super.keyPressed(e);
```

```
}
```