

1-设置温度场，是个标量场，nodeDofCount=1;

```
temperatureField = uw.mesh.MeshVariable( mesh=mesh, nodeDofCount=1 )
```

```
for index, coord in enumerate(mesh.data):
```

```
    temperatureField.data[index] = coord[0] * (1.0 - coord[1])
```

上式设置了不同的稳固，



2-速度场，矢量场。值为2;



```
coordmid = (0.5, 0.5)
```

```
for index, coord in enumerate(mesh.data):
```

```
    mag = math.sin( coord[0]*(math.pi) )*math.sin( coord[1]*(math.pi) )
```

```
    vx = -mag * (coord[1]-coordmid[1])
```

```
    vy = mag * (coord[0]-coordmid[0])
```

```
    velocityField.data[index] = (vx, vy)
```

```
    temperatureField.data[index] = 1 - coord[1]
```



variable gradients: 变量导数:

温度有个专门的导数: `gradTemp = temperatureField.fn_gradient`



加载和保存变量: