```
#Samruddhi Pendurkar

import tensorflow as tf
x = tf.constant([[1., 2., 3.],
                 [4., 5., 6.],
                 [7., 8., 9.]])
x = tf.reshape(x, [1, 3, 3, 1])
max_pool_2d = tf.keras.layers.MaxPooling2D(pool_size=(2, 2), strides=(1, 1), padding='valid')
max_pool_2d(x)
```

```
<tf.Tensor: shape=(1, 2, 2, 1), dtype=float32, numpy=
array([[[[5.],
         [6.]],

        [[8.],
         [9.]]]], dtype=float32)>
```

```
x = tf.constant([[1., 2., 3., 4.],
                 [5., 6., 7., 8.],
                 [9., 10., 11., 12.]])
x = tf.reshape(x, [1, 3, 4, 1])
max_pool_2d = tf.keras.layers.MaxPooling2D(pool_size=(2, 2),
   strides=(2, 2), padding='valid')
max_pool_2d(x)
```

```
<tf.Tensor: shape=(1, 1, 2, 1), dtype=float32, numpy=
array([[[[6.],
         [8.]]]], dtype=float32)>
```

```
x = tf.constant([[1., 2., 3., 4.],
                 [5., 6., 7., 8.],
                 [9., 10., 11., 12.]])
x = tf.reshape(x, [1, 3, 4, 1])
max_pool_2d = tf.keras.layers.MaxPooling2D(pool_size=(2, 2),
   strides=(2, 2), padding='same')
max_pool_2d(x)
```

```
<tf.Tensor: shape=(1, 2, 2, 1), dtype=float32, numpy=
array([[[[ 6.],
         [ 8.]],

        [[10.],
         [12.]]]], dtype=float32)>
```

```
x = tf.constant([[1., 2., 3., 4.],
                 [5., 6., 7., 8.],
                 [9., 10., 11., 12.]])
x = tf.reshape(x, [1, 3, 4, 1])
max_pool_2d = tf.keras.layers.MaxPooling2D(pool_size=(2, 2),
   strides=(1, 1), padding='same')
max_pool_2d(x)
```

```
<tf.Tensor: shape=(1, 3, 4, 1), dtype=float32, numpy=
array([[[[ 6.],
         [ 7.],
         [ 8.],
         [ 8.]],

        [[10.],
         [11.],
         [12.],
         [12.]],

        [[10.],
         [11.],
         [12.],
         [12.]]]], dtype=float32)>
```