tf.pad

```
pad(
    tensor,
    paddings,
    mode='CONSTANT',
    name=None,
    constant_values=0
)
```

Defined in `tensorflow/python/ops/array_ops.py`.

See the guide: Tensor Transformations > Slicing and Joining

Pads a tensor.

This operation pads a `tensor` according to the `paddings` you specify. `paddings` is an integer tensor with shape `[n, 2]`, where n is the rank of `tensor`. For each dimension D of `input`, `paddings[D, 0]` indicates how many values to add before the contents of `tensor` in that dimension, and `paddings[D, 1]` indicates how many values to add after the contents of `tensor` in that dimension. If `mode` is "REFLECT" then both `paddings[D, 0]` and `paddings[D, 1]` must be no greater than `tensor.dim_size(D) - 1`. If `mode` is "SYMMETRIC" then both `paddings[D, 0]` and `paddings[D, 1]` must be no greater than `tensor.dim_size(D)`.

The padded size of each dimension D of the output is:

`paddings[D, 0] + tensor.dim_size(D) + paddings[D, 1]`

For example:

```
t = tf.constant([[1, 2, 3], [4, 5, 6]])
paddings = tf.constant([[1, 1,], [2, 2]])
# 'constant_values' is 0.
# rank of 't' is 2.
tf.pad(t, paddings, "CONSTANT")  # [[0, 0, 0, 0, 0, 0, 0],
                                 #  [0, 0, 1, 2, 3, 0, 0],
                                 #  [0, 0, 4, 5, 6, 0, 0],
                                 #  [0, 0, 0, 0, 0, 0, 0]]

tf.pad(t, paddings, "REFLECT")  # [[6, 5, 4, 5, 6, 5, 4],
                                #  [3, 2, 1, 2, 3, 2, 1],
                                #  [6, 5, 4, 5, 6, 5, 4],
                                #  [3, 2, 1, 2, 3, 2, 1]]

tf.pad(t, paddings, "SYMMETRIC")  # [[2, 1, 1, 2, 3, 3, 2],
                                  #  [2, 1, 1, 2, 3, 3, 2],
                                  #  [5, 4, 4, 5, 6, 6, 5],
                                  #  [5, 4, 4, 5, 6, 6, 5]]
```

Args:

- `tensor`: A `Tensor`.
- `paddings`: A `Tensor` of type `int32`.
- `mode`: One of "CONSTANT", "REFLECT", or "SYMMETRIC" (case-insensitive)

- `name`: A name for the operation (optional).
- `constant_values`: In "CONSTANT" mode, the scalar pad value to use. Must be same type as `tensor`.

Returns:

A `Tensor`. Has the same type as `tensor`.

Raises:

- `ValueError`: When mode is not one of "CONSTANT", "REFLECT", or "SYMMETRIC".
