tf.diag_part

```
diag_part(
    input,
    name=None
)
```

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

See the guide: Math > Matrix Math Functions

Returns the diagonal part of the tensor.

This operation returns a tensor with the `diagonal` part of the `input`. The `diagonal` part is computed as follows:

Assume `input` has dimensions `[D1,..., Dk, D1,..., Dk]`, then the output is a tensor of rank `k` with dimensions `[D1,..., Dk]` where:

`diagonal[i1,..., ik] = input[i1, ..., ik, i1,..., ik]`.

For example:

```
# 'input' is [[1, 0, 0, 0]
              [0, 2, 0, 0]
              [0, 0, 3, 0]
              [0, 0, 0, 4]]

tf.diag_part(input) ==> [1, 2, 3, 4]
```

Args:

- `input`: A `Tensor`. Must be one of the following types: `float32`, `float64`, `int32`, `int64`, `complex64`, `complex128`. Rank k tensor where k is 2, 4, or 6.
- `name`: A name for the operation (optional).

Returns:

A `Tensor`. Has the same type as `input`. The extracted diagonal.

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