tf.linalg.slogdet

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

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

Computes the sign and the log of the absolute value of the determinant of

one or more square matrices.

The input is a tensor of shape `[N, M, M]` whose inner-most 2 dimensions form square matrices. The outputs are two tensors containing the signs and absolute values of the log determinants for all N input submatrices `[..., :, :]` such that the determinant = sign*exp(log_abs_determinant). The log_abs_determinant is computed as det(P)*sum(log(diag(LU))) where LU is the LU decomposition of the input and P is the corresponding permutation matrix.

Args:

- `input`: A `Tensor`. Must be one of the following types: `float32`, `float64`, `complex64`, `complex128`. Shape is `[N, M, M]`.
- `name`: A name for the operation (optional).

Returns:

A tuple of `Tensor` objects (sign, log_abs_determinant).

- `sign`: A `Tensor`. Has the same type as `input`. The signs of the log determinants of the inputs. Shape is `[N]`.
- `log_abs_determinant`: A `Tensor`. Has the same type as `input`. The logs of the absolute values of the determinants of the N input matrices. Shape is `[N]`.

English