**Tutorial 3 d – Flatten and Partition Transform in Apache Beam:**

**Partition:**

* [Partition](https://github.com/apache/beam/blob/master/sdks/python/apache_beam/transforms/core.py) is a Beam transform for PCollection objects that store the same data type. It splits a single PCollection into a fixed number of smaller collections.
* Partition divides the elements of a PCollection according to a partitioning function that you provide.
* The partitioning function contains the logic that determines how to split up the elements of the input PCollection into each resulting partition PCollection.
* The number of partitions must be determined at graph construction time.
* Partition accepts a function that receives the number of partitions, and returns the index of the desired partition for the element. The number of partitions passed must be a positive integer, and it must return an integer in the range 0 to num\_partitions-1.

**Flatten:**

* [Flatten](https://github.com/apache/beam/blob/master/sdks/python/apache_beam/transforms/core.py) is a Beam transform for PCollection objects that store the same data type.
* Merges multiple PCollection objects into a single logical PCollection.

**Resources:**

* <https://beam.apache.org/documentation/programming-guide/#flatten>
* <https://beam.apache.org/documentation/programming-guide/#partition>
  + <https://beam.apache.org/documentation/transforms/python/elementwise/partition/>