

## Abstract

Fragmentation and replication is one way of processing a *database* primarily used in the distributed *database*. The representation of data in distributed *database* by applying the fragmentation and replication has the advantage that the availability of data will be maintained and the burden borne by the servers become smaller compared with the centralized *database*.

For a *user* data with a large number of transactions that access to high-data *database* design choice of course can not be ignored, the selection of appropriate design can assist in overcoming problems that may result from the design limitations of other *databases*. As in the case of student registration, judging from the number of *users*, of course, there were not a little, but that the *user* wants a smooth process, not hampered because of the servers are down or slow access because too many *users* are accessing. Server is divided into multiple servers that had only one server only, it is intended that the server load can be reduced by consideration of the server division is based on the existing departments, it is intended that the majority of *users* access the department server access on the server than the other majors, this process is called the fragmentation, for replication if there is meant to be one of server down when we divide the data into multiple servers in the data dependency on a down server can be taken over by the replication server.

**Keywords:** fragmentation, replication, distributed *databases*, availability, centralized *database*, server