



06<sup>th</sup> OCT 2023 to  
15<sup>th</sup> April 2024

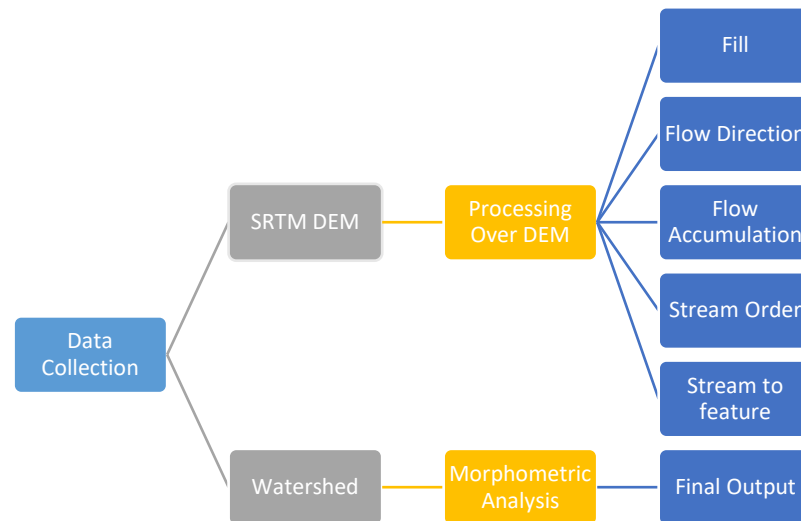
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## MAJOR OBJECTIVES:

- To Perform the Morphometric analysis of Drainage basin using GIS Techniques in the area by various Parameters.
- To compare the morphometric studies of the given basin with another basin.

## METHODOLOGY FLOW CHART:



## RESULTS/MAJOR FINDINGS:

- ✓ GIS and Remote sensing techniques have proved to be accurate and efficient tool in drainage delineation and their updation.
- ✓ Bifurcation ratio, length ratio and stream order of basin indicates that the basin is fourth order basin with dendritic type of drainage pattern with homogeneous nature and there is no structural or tectonic control.
- ✓ Relief ratio, Ruggedness number and visual interpretation of DEM of study area indicate moderate and high relief, low run off and high infiltrations with early mature stage of erosion development. Drainage density, texture ratio, circulatory ratio and elongation ratio shows that texture of basin is moderate and shape of basin almost elongated. The complete morphometric analysis of drainage basin indicates that the given area is having good groundwater prospect.

**CONCLUSION:** Morphometric analysis portrays the given area as having good groundwater prospects, attributed to its favorable drainage characteristics and hydrological properties. This comprehensive assessment underscores the significance of morphometric analysis in understanding the geomorphic and hydrological features of drainage basins, thereby contributing to informed decision-making in water resource management and environmental planning.