The nozzle is the part of the air-jet and Jetring yarn production systems. In these spinning systems, the pressurized air is fed into the nozzle and the yarn is twisted by the airflow arising in the nozzle. The nozzle design and air pressure level affects the yarn quality. Present work analysed the airflow variables and character in the nozzle having different injector angles computationally. Nozzle injector angle is one of important nozzle parameter affecting the yarn properties. In the analysis, ANSYS 12.1 package program and Fluid Flow (CFX) analysis method was used. The airflow variables, particularly air pressure, air velocity and air density, and the airflow character of the nozzles having different injector angles were obtained.