Let $X_{1:n},X_{2:n},\ldots.,X_{n:n}$ be a random sample of size n from a continuous population having pdf f(x) and cdf F(x).A more explicit notation of the order statistics is $X_{(1,n)},X_{(2,n)},...,X_{(n,n)}$.Where, $X_{1:n}\ $ = the 1^{st} order statistic = the smallest observation = min $(X_{1:n},X_{2:n},....,X_{n:n})$ ${\ X}_{n:n}\ $ = the n^{th} order statistic = the largest observation = max $(X_{1:n},X_{2:n},....,X_{n:n})$ and $X_{r:n}$= the r^{th} order statistic = the r^{th} smallest value Remark 1.1.The sample observation can be arranged in ascending order of magnitude such that $X_{1:n}\le X_{2:n}\le\ldots.\le X_{n:n}$,where the numbers i=1,2,\ldots, indicate the rank of the observation in the sample.1.1 Functions of Order Statistics Range and Mid-Range: A range is the distance between the smallest observation $X_{1:n}$ and the largest observation $X_{n:n}$ observations.Thus, the sample median becomes

$$\widetilde{X}=\frac{1}{2}\left(X_{m:n}+X_{m+1:n}\right)=\frac{1}{2}\left(X_{{\frac{n}{2}}:n}+X_{{\frac{n}{2}}+1}:n}\right)\ \ \ \ (1.4)$$

Remark 1.2.Remark 1.3