Exercises

E8.87 [OM1] Prerequisites:Generated topology [OJ1], [OKX], [OKZ].Let's resume [OKZ]. Let again X be a set and $\mathcal{B}$ a family of subsets that satisfy the above properties *(a),(b)* seen in [OKX]; suppose τ the smallest topology that contains $\mathcal{B}$. Prove that $\mathcal{B}$ is a base for τ.

Solution 1. *[OM2]*

We can therefore say that a family that satisfies *(a),(b)* is a base for the topology it generates. This answers the question posed in [OKV].