

Errata to the book *Functional analysis* by W. Rudin

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These are errata to the book

W. Rudin, *Functional analysis*, McGraw-Hill, 1973.

p.26, Proof of Theorem 1.37

At the end of the first paragraph it is stated without proof that \mathcal{B} is a local base for τ . Here is a simple argument showing this assertion. Let U be an open neighbourhood of 0. We have to show that U includes a member of \mathcal{B} . First, U contains an open neighbourhood of 0 of the form $\cap_{j=1}^k (a + V(p_j, n_j))$. Then $p_j(a) < n_j^{-1}$ for all j . Choose a positive integer m_j such that $m_j^{-1} < n_j^{-1} - p_j(a)$. Then $V(p_j, m_j) \subset a + V(p_j, n_j)$ for all j . Hence $\cap_{j=1}^k V(p_j, m_j)$ is a member of \mathcal{B} which is included in $\cap_{j=1}^k (a + V(p_j, n_j))$.