**ABSTRACT.** It is the purpose of this note to give a description of a simple-minded "alternating projections" algorithm and to very briefly mention some of its many and diverse applications. (A more comprehensive and detailed survey — with a lengthier list of reference — is planned for a later date.)

In its simplest (abstract) form, the algorithm goes back to von Neumann [20] and can be described as follows. Suppose $M_1$ and $M_2$ are two closed subspaces of a Hilbert space $X$ and $x$ is any element of $X$. The vector $x$ is first (orthogonally) projected onto $M_1$ to obtain a new vector $x_1$; then $x_1$ is projected onto $M_2$ to obtain $x_2$; then $x_2$ is projected back onto $M_1$ to obtain $x_3$, and we continue to alternately project back and forth between the two subspaces. The sequence of vectors $(x_n)$ thus generated converges to the projection of $x$ onto the intersection $M_1 \cap M_2$ of $M_1$ and $M_2$ (see Figure 1 below).