T5 - Assignment 7

1. Suppose $\{v_1, v_2, v_3, \ldots, v_n\}$ is a basis of an inner product space V. Using this basis, construct an orthogonal basis of V.

2. Apply the Gram-Schmidt Orthonormalization process to find an orthonormal basis for the subspace U of $\mathbb{R}^n$ spanned by
   a. $\{(1,1,0), (1,0,1)\}$.
   b. $\{(1,1,1,1), (1,2,4,5), (1,-3,-4,-2)\}$.