For the purposes of this module you should take the following as the definitions of a stream cipher, Vigenère cipher, and one-time-pad cipher.

A \textit{stream cipher} over an alphabet $A$ consists of a keyword $k = k_1k_2...k_n$ which is a sequence of elements of $A$ of the same length as the plaintext $p = p_1p_2...p_n$, and a substitution table $S$ which is an $|A| \times |A|$ array with entries from $A$ with the property that no element of $A$ appears twice in the same column of $S$. The rows and columns of $S$ are labeled by the elements of $A$. The ciphertext $z = z_1z_2...z_n$ is given by $z_i = p_i \oplus k_i$ for $i = 1, 2, ..., n$, where $p_i \oplus k_i$ is the entry in row $p_i$ and column $k_i$ of $S$.

A \textit{Vigenère cipher} is a stream cipher over the alphabet \{a, b, c, ..., z\} in which the substitution table is the Vigenère square.

A \textit{one-time-pad cipher} is a stream cipher in which the keyword is a uniformly distributed random sequence of letters from $A$, and the substitution table is a Latin square.