Let \( p \) be a prime number. In the late 1950’s, Kenkichi Iwasawa proved that for a number field \( F \) and a \( \mathbb{Z}_p \) extension \( F_{\infty} \) of \( F \), that the \( p \)-primary part of the class groups of the sub-extensions grow in a manner ruled by three invariants: \( \mu, \lambda, \) and \( \nu \). A paper by Ralph Greenberg in 1976 studied these invariants when \( F \) is totally real and \( F_{\infty} \) is the cyclotomic \( \mathbb{Z}_p \) extension, and conjectured that \( \mu = \lambda = 0 \) in this case. He provided conditions for this conjecture to hold, and gave some numerical evidence. Many authors have taken up the task of proving this conjecture, and these talks will focus mainly on a paper by Hiroki Sumida published in 1997. Sumida uses isomorphism classes of \( \Lambda \)-modules (where \( \Lambda = \mathbb{Z}_p[[T]] \)) and the characteristic polynomials of these modules. Part 1 will provide background and early results, while Part 2 will finish the paper and present more results on \( \Lambda \)-module isomorphisms.