In the eighties, Mazur, using work of Schlessinger, introduced techniques of deformation theory in the study of Galois representations. The main motivation for studying deformations of representations for finite groups is to provide evidence for and counter-examples to various possible conjectures concerning ring theoretic properties of universal deformation rings for profinite Galois groups. In this talk, we will show how techniques from ordinary and local representation theory can be used to compute explicitly universal deformation rings for certain representations of finite groups. (Received September 15, 2007)