I will exhibit three projective models of the supersingular K3 surface in characteristic 5 with Artin invariant 1. Moreover, I will determine non-singular rational curves on the K3 surface with minimal degree with respect to polarizations. Also, I will  
show that the projective automorphism group is PGU(3,F\_5), A\_8 or 2^4(3\times S\_4), respectively.