CS3133

HW#8

DUE: Tuesday, October 8

1.(5 points) Design a Turing Machine to accept $(0+1)^* 00(0+1)^*$.

2. (4 points) Do **Exercises 8.2.1.a** and **8.2.1.b** from our text.

3. (4 points) Do **Exercises 8.2.5.a** and **8.2.5.b** from our text.

4. (8 points) Show that testing membership in context free languages belongs to $\wp$. That is, there is a Turing Machine which accepts as input a context free grammar $G=(V,T,P,S)$ and string $w \in T^*$ and decides whether $w \in L(G)$ in a number of steps which is bounded by a polynomial function of $|V|+|T|+|P|+|w|$.