CSL211
TUTORIAL SHEET Sep 19th week

1. What is the MIPS Instruction format for:
    1. Register-register instruction
    2. Data Transfer instruction
    3. Branch Instruction
    4. Jump Instruction
2) How do you load a 32 bit constant in a register in MIPS?
3) Prove the correctness of the non-restoring algorithm?
4) Design a floating point representation, for a base 3 system. Design an appropriate rounding scheme.
5) Assume that the exponent *e* is constrained to lie in the range 0 <= e <= X with a bias of *q* , and the base is *b* . The significand is *p* digits in length.
    1. What are the largest and smallest positive values that can be written in normalized form.
    2. What are the largest and smallest positive values that can be written in denormalized form.
6) Normally, in Booth's algorithm, we consider the current bit, and the previous bit. Based on these two values, we decide whether we need to add or subtract a shifted version of the multiplicand This is called radix-2 Booth's algorithm, because we are considering two bits at one time. How will a radix-3 Booth's algorithm work, where you consider the previous bit, and the next two bits?
7) How to tell if a binary unsigned number is divisible by 3?