

**CS2310: Foundations of Computer System Design Lab**

**August-November 2021 Semester**

**Assignment 6**

**Date: 6<sup>th</sup> October, 2021**

**Deadline for Submission: 11.59PM on 12<sup>th</sup> October, 2021**

**Design of 16-bit Floating Point Multiplier**

**16-bit floating point format:**

Sign bit

Biased Exponent: 8 bits

Mantissa Fraction: 7 bits

**Normal numbers**

The input and output operands are to be specified using either %B or %X format.  
The %D format cannot be used.

**Test cases:**

Two pairs of numbers of the same sign

Two pairs of numbers of opposite sign

One pair of numbers for which the magnitude of the product of mantissas is greater than 2.0

One pair of numbers for which the magnitude of the product of mantissas is between 1.0 and 2.0