Numbers and Arithmetic

Extension Assignment Rubric

Check Items

Description	Points	Comments	Grade
Differences between decimal, binary, octal, and hexadecimal are explained.	5		
Conversion from hexadecimal to decimal is demonstrated, showing all work.	10		
Conversion from binary to decimal is demonstrated, showing all work.	10		
First subtraction example is demonstrated correctly using nine’s complement arithmetic.	5		
Second subtraction example is demonstrated correctly using nine’s complement arithmetic.	5		
Third subtraction example is demonstrated correctly using nine’s complement arithmetic.	5		
Fourth subtraction example is demonstrated correctly using nine’s complement arithmetic.	5		
Left shifts are explained correctly.	5		
Logical right shifts are explained correctly.	5		
Arithmetic right shifts are explained correctly.	10		
IEEE 754 precision levels are correctly identified.	5		
The number of representations for zero in IEEE 754 is explained correctly.	5		
The parts of an IEEE 754 floating point number are correctly identified.	5		
IEEE 754 subnormal numbers are explained correctly.	5		
Hard float and soft float architectures are explained correctly.	5		

An example of a hard float CPU is given.	5		
An example of a soft float CPU is given.	5		
MAXIMUM GRADE:	100	**Hypothetical Grade:**	

Grade

Calculation Algorithm	Your Grade
If Hypothetical Grade ≥ 70 then enter Hypothetical Grade Else enter 0	**x**

A grade of 85 or higher is required to be able to continue onto the Challenge Assignment. As a result, you MAY [NOT] submit a Challenge Assignment in this course.

Remarks

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