

Brian Loughran
Module 10 HW
Johns Hopkins

Compiler Optimization Exercise:

1	:=	#1		Indx
2	BGT	Indx	#8	(19)
3	-	Indx	#1	i1
4	*	i1	#10	i2
5	*	#3	HAL	i3
6	-	i3	#1	i4
7	-	i4	#1	i5
8	+	i2	i5	i6
9	*	i6	#4	i7
10	:=	i8		i1
11	-	i2	#10	i9
12	:=	i3		i10
13	:=	i4		i11
14	+	i9	i11	i12
15	*	i12	#4	i13
16	:=	Y[i13]		X[i7]
17	:=	i14	Indx	Indx
18	JMP			(2)
19				

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Quadruples Exercise

1	:=	#1		I	
2	BGT	I	#15	(19)	
3	*	J	#2	i1	2J
4	+	i1	#1	i2	2J+1
5	-	#21	#1	i3	upper2-lower2
6	+	i3	#1	i4	upper2-lower2+1
7	-	I	#1	i5	s1-lower
8	-	i2	#1	i6	s2-lower
9	*	i5	i3	i7	
					[(s1 - lower1) * (upper2 - lower2 + 1) + (s2 - lower2)]
10	+	i7	i6	i8	
11	*	#4	i8	i9	full function
12	-	I	#1	i10	s1-lower
13	-	i1	#1	i11	s2-lower
14	*	i5	i3	i12	
					[(s1 - lower1) * (upper2 - lower2 + 1) + (s2 - lower2)]
15	+	i7	i6	i13	
16	*	#4	i8	i14	full function
17	:=	X[i9]		Y[i14]	
18	JMP			(2)	
19					