Quiz #2
Monday, October 1st

ALL QUESTIONS ARE MULTIPLE CHOICE:

Circle the correct assembly language implementation of each of the following:

1.
```
uint32_t u32 ;
uint64_t u64 ;

u64 = (uint64_t) u32 ;
```

LDR R0,u32
STRD R0,0,u64
	LDR R0,u32
	STRD R0,R1,u64
		LDRD R0,R1,u32
		STRD R0,R1,u64
			LDR R0,u32
			LDR R1,=0
			STRD R0,R1,u64

2.
```
uint64_t u64, *p64 ;

p64 = &u64 ;
```

ADR R0,&u64 STR R0,p64	ADR R0,u64 STR R0,p64	ADRD R0,R1,u64 STRD R0,R1,p64	MOV p64,u64

3.
```
void f1(uint32_t) ;      // Function prototype declaration
uint32_t u32 ;

f1(u32) ;
```

BL f1 LDR R0,u32	MOV R0,u32 BL f1	LDR R0,u32 BX f1	LDR R0,u32 BL f1

CONTINUED ON OTHER SIDE

4. uint32_t f3(uint8_t u8)
{
return (uint32_t) u8 ;
}

f3: BX LR	f3: LDR R0,u8 BX LR	f3: LDRB R0,u8 BX LR	f3: MOV R1,0 BX LR

5. uint32_t f4(uint32_t a32)
{
uint32_t f5(void) ; // Prototype declaration

return a32 + f5() ;
}

f4: BL f5
ADD R0,R0,a32
BX LR
	f4: MOV R4,R0
	BL f5
	ADD R0,R0,R4
	BX LR
		f4: PUSH {LR}
		MOV R4,R0
		BL f5
		ADD R0,R0,R4
		POP {PC}
			f4: PUSH {R4,LR}
			MOV R4,R0
			BL f5
			ADD R0,R0,R4
			POP {R4,PC}

6. int32_t f6(int32_t s32)
{
int32_t f7(int32_t) ; // Prototype declaration

return f7(s32 + 3) + 5 ;
}

f6: ADD R0,R0,3
BL f7
ADD R0,R0,5
BX LR
	f6: PUSH {LR}
	ADD R0,R0,3
	BL f7
	ADD R0,R0,5
	POP {PC}
		f6: PUSH {LR}
		LDR R0,s32+3
		BL f7
		ADD R0,R0,5
		POP {LR}
		BX LR
			f6: PUSH {LR}
			LDR R0,s32
			ADD R0,R0,3
			BL f7
			ADD R0,R0,5
			POP {LR}
			BX LR