

Promotion During Assignment

Destination	Source	Unsigned		Signed	
16 bits	8 bits	LDRB STRH	R0,u8 R0,u16	LDRSB STRH	R0,s8 R0,s16
32 bits	8 bits	LDRB STR	R0,u8 R0,u32	LDRSB STR	R0,s8 R0,s32
	16 bits	LDRH STR	R0,u16 R0,u32	LDRSH STR	R0,s16 R0,s32
64 bits	8 bits	LDRB LDR STRD	R0,u8 R1,=0 R0,R1,u64	LDRSB ASR STRD	R0,s8 R1,R0,#31 R0,R1,s64
	16 bits	LDRH LDR STRD	R0,u16 R1,=0 R0,R1,u64	LDRSH ASR STRD	R0,s16 R1,R0,#31 R0,R1,s64
	32 bits	LDR LDR STRD	R0,u32 R1,=0 R0,R1,u64	LDR ASR STRD	R0,s32 R1,R0,#31 R0,R1,s64

Pointer Arithmetic and Subscripting

Pointer Arithmetic	ARM Assembly	Subscripting	ARM Assembly
int8_t *p8 ; int32_t k32 ; *(p8 + k32) = 0 ;	LDR R0,=0 LDR R1,p8 LDR R2,k32 STRB R0,[R1,R2]	int8_t a8[100] ; int32_t k32 ; a8[k32] = 0 ;	LDR R0,=0 ADR R1,a8 LDR R2,k32 STRB R0,[R1,R2]
int16_t *p16 ; int32_t k32 ; *(p16 + k32) = 0 ;	LDR R0,=0 LDR R1,p16 LDR R2,k32 STRH R0,[R1,R2,LSL #1]	int16_t a16[100] ; int32_t k32 ; a16[k32] = 0 ;	LDR R0,=0 ADR R1,a16 LDR R2,k32 STRH R0,[R1,R2,LSL #1]
int32_t *p32 ; int32_t k32 ; *(p32 + k32) = 0 ;	LDR R0,=0 LDR R1,p32 LDR R2,k32 STR R0,[R1,R2,LSL #2]	int32_t a32[100] ; int32_t k32 ; a32[k32] = 0 ;	LDR R0,=0 ADR R1,a32 LDR R2,k32 STR R0,[R1,R2,LSL #2]
int64_t *p64 ; int32_t k32 ; *(p64 + k32) = 0 ;	LDR R0,=0 LDR R1,p16 LDR R2,k32 STRD R0,R0,[R1,R2,LSL #3]	int64_t a64[100] ; int32_t k32 ; a64[k32] = 0 ;	LDR R0,=0 ADR R1,a64 LDR R2,k32 STRD R0,R0,[R1,R2,LSL #3]