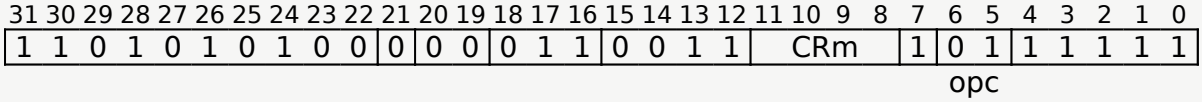
DMB

Data Memory Barrier is a memory barrier that ensures the ordering of observations of memory accesses, see *Data Memory Barrier*.



DMB <option>|#<imm>

```
MBReqDomain domain;
MBReqTypes types;
case CRm<3:2> of
    when '00' domain = MBReqDomain_OuterShareable;
    when '01' domain = MBReqDomain_Nonshareable;
    when '10' domain = MBReqDomain_InnerShareable;
    when '11' domain = MBReqDomain_FullSystem;
case CRm<1:0> of
    when '00' types = MBReqTypes_All; domain = MBReqDomain_FullSystem;
    when '01' types = MBReqTypes_Reads;
    when '10' types = MBReqTypes_Writes;
    when '11' types = MBReqTypes_All;
```

Assembler Symbols

<option> Specifies the limitation on the barrier operation. Values are:

SY
: Full system is the required shareability domain, reads and writes are the required access types, both before and after the barrier instruction. This option is referred to as the full system barrier. Encoded as CRm = 0b1111.

ST
: Full system is the required shareability domain, writes are the required access type, both before and after the barrier instruction. Encoded as CRm = 0b1110.

LD
: Full system is the required shareability domain, reads are the required access type before the barrier instruction, and reads and writes are the required access types after the barrier instruction. Encoded as CRm = 0b1101.

ISH
: Inner Shareable is the required shareability domain, reads and writes are the required access types, both before and after the barrier instruction. Encoded as CRm = 0b1011.

ISHST
: Inner Shareable is the required shareability domain, writes are the required access type, both before and after the barrier instruction. Encoded as CRm = 0b1010.

ISHLD
: Inner Shareable is the required shareability domain, reads are the required access type before the barrier instruction, and reads and writes are the required access types after the barrier instruction. Encoded as CRm = 0b1001.

NSH
: Non-shareable is the required shareability domain, reads and writes are the required access, both before and after the barrier instruction. Encoded as CRm = 0b0111.

NSHST
: Non-shareable is the required shareability domain, writes are the required access type, both before and after the barrier instruction. Encoded as CRm = 0b0110.

NSHLD
: Non-shareable is the required shareability domain, reads are the required access type before the barrier instruction, and reads and writes are the required access types after the barrier instruction. Encoded as CRm = 0b0101.

OSH
: Outer Shareable is the required shareability domain, reads and writes are the required access types, both before and after the barrier instruction. Encoded as CRm = 0b0011.

OSHST

<imm>	Is a 4-bit unsigned immediate, in the range 0 to 15, encoded in the "CRm" field.

Operation

```
DataMemoryBarrier(domain, types);
```

Internal version only: isa v33.64, AdvSIMD v29.12, pseudocode no_diffs_2023_09_RC2, sve v2023-06_rel ; Build timestamp: 2023-09-18T17:56