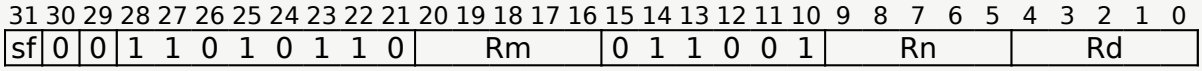
UMAX (register)

Unsigned Maximum (register) determines the unsigned maximum of the two source register values and writes the result to the destination register.

Integer
(FEAT_CSSC)



32-bit (sf == 0)

```
UMAX <Wd>, <Wn>, <Wm>
```

64-bit (sf == 1)

```
UMAX <Xd>, <Xn>, <Xm>
```

```
if !IsFeatureImplemented(FEAT_CSSC) then UNDEFINED;
constant integer datasize = 32 << UInt(sf);
integer n = UInt(Rn);
integer m = UInt(Rm);
integer d = UInt(Rd);
```

Assembler Symbols

<Wd>	Is the 32-bit name of the general-purpose destination register, encoded in the "Rd" field.
<Wn>	Is the 32-bit name of the first general-purpose source register, encoded in the "Rn" field.
<Wm>	Is the 32-bit name of the second general-purpose source register, encoded in the "Rm" field.
<Xd>	Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
<Xn>	Is the 64-bit name of the first general-purpose source register, encoded in the "Rn" field.
<Xm>	Is the 64-bit name of the second general-purpose source register, encoded in the "Rm" field.

Operation

```
bits(datasize) operand1 = X[n, datasize];
bits(datasize) operand2 = X[m, datasize];
integer result = Max(UInt(operand1), UInt(operand2));
X[d, datasize] = result<datasize-1:0>;
```

Operational information

If PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.

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