## How DP instructions affect Flags C, V, Z, N

|                                 | Effect on Flags                             |   |                            |
|---------------------------------|---|---|----------------------------|
| Instructions                    | if S-bit = 0                                | if $S$ -bit = 1 and                         | if $S$ -bit = 1 and        |
|                                 |   | no shift/rotate                             | shift/rotate is there      |
| add, sub, rsb,<br>adc, sbc, rsc | No flags are affected                       | All 4 flags are affected, ALU carry is used |                            |
| cmp, cmn                        | All 4 flags are affected, ALU carry is used |   |                            |
| and, orr, xor, bic,             | No flags are affected                       | Only Z and N are                            | C, Z and N are affected    |
| mov, mvn                        |   | affected                                    | shift/rotate carry is used |
| tst, teq                        | Only Z and N are affected                   |   | simulotate carry is used   |