MD4 Algorithm

$(H_1, H_2, H_3, H_4) := (A, B, C, D)$

Round 1

for $i := 0$ **to** 15 **do**

$t := A + F(B, C, D) + M_i + K_1$

$(A, B, C, D) := (D, t \lll s_i, B, C)$

end

Round 2

for $i := 16$ **to** 31 **do**

$t := A + G(B, C, D) + M_{z(i)} + K_2$

$(A, B, C, D) := (D, t \lll s_i, B, C)$

end

Round 3

for $i := 32$ **to** 47 **do**

$t := A + H(B, C, D) + M_{z(i)} + K_3$

$(A, B, C, D) := (D, t \lll s_i, B, C)$

end

$(A, B, C, D) := (H_1 + A, H_2 + B, H_3 + C, H_4 + D)$