# Argon CPU bypassing
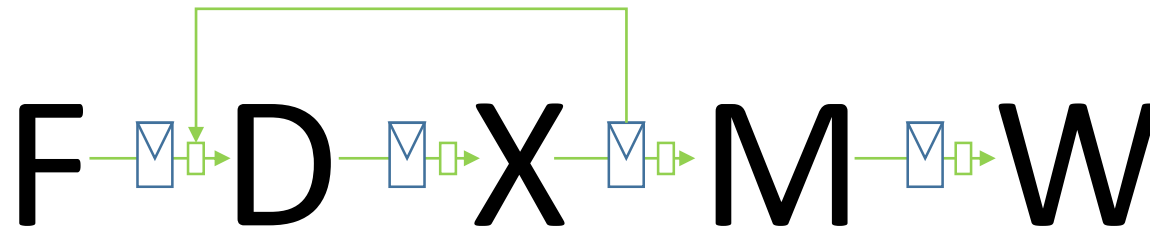
There are totally 5 bypass ways
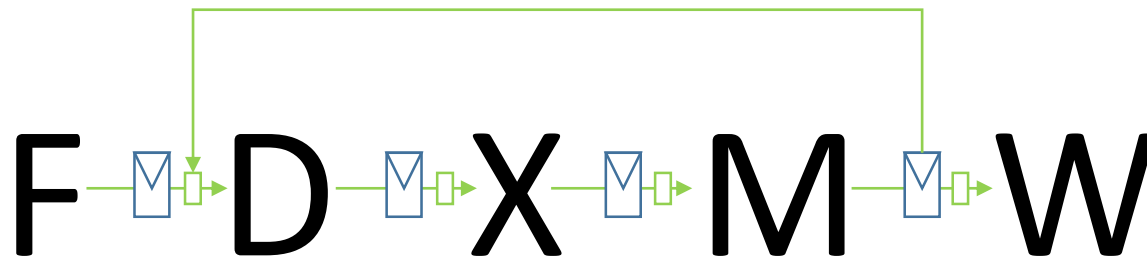
# 1) After X to D



```
add R3,R2,R1    | F D X M W
nop             |   F D X M W
add R4,R3,R1    |     F D X M W
```
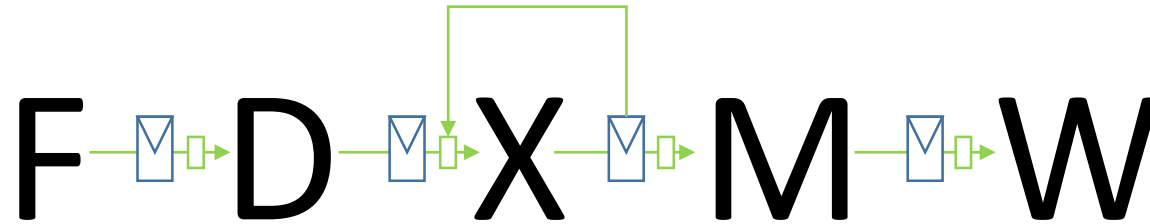
# 2) After M to D
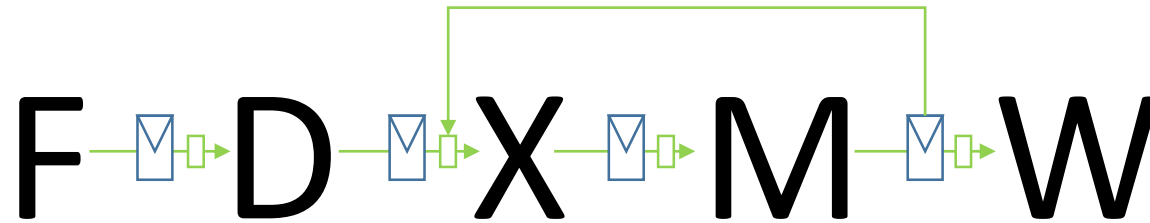


```
add R3,R2,R1    |  F D X M W
nop             |    F D X M W
nop             |      F D X M W
add R4,R3,R1    |        F D X M W
```

# 3) After X to X

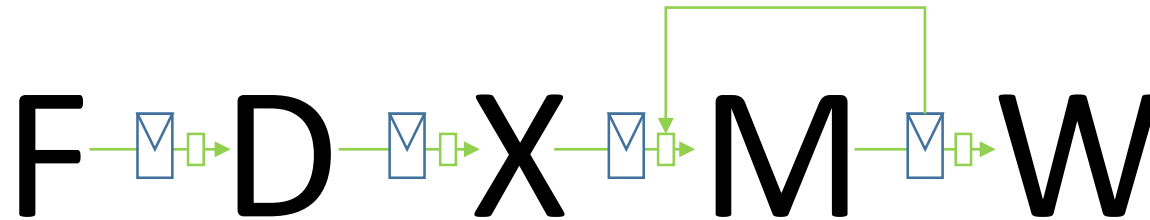

```
add R3,R2,R1    | F D X M W
add R4,R3,R1    |   F D X M W
```

# 4) After M to X



```
lw  R3, (R2+255)  | F D X M W
nop               |   F D X M W // (auto stall)
add R4,R3,R1      |     F D X M W
```

# 5) After M to M



```
lw  R3,(R2+255)  | F D X M W
lw  R4,(R3+255)  |   F D X M W
```