

Φ -elimination Primitive
(To replace Φ statement
with multiple assignment
statements)

Shadow Register Primitive
(To store values in
intermediate registers to
prevent Read After Write
hazards)

Interchange Primitive
(To interchange two
adjacent steps if no read
write hazards)

Branch Primitive
(To add and remove
branches while maintaining
control flow)

Superstep Construction
Primitive
(to overlap iterations based
on pipeline interval while
maintaining control and
data dependencies)