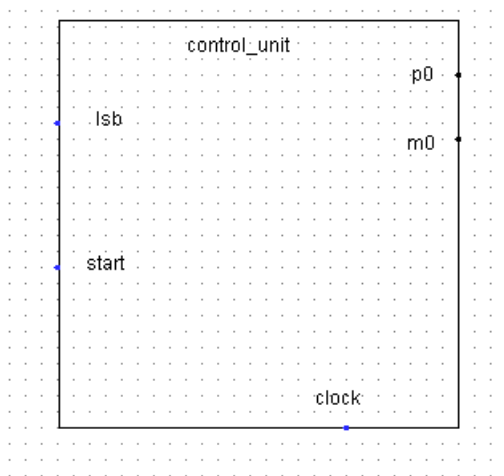CSE 331/503

Computer Organization

Homework 3

Erkan Yılmaz
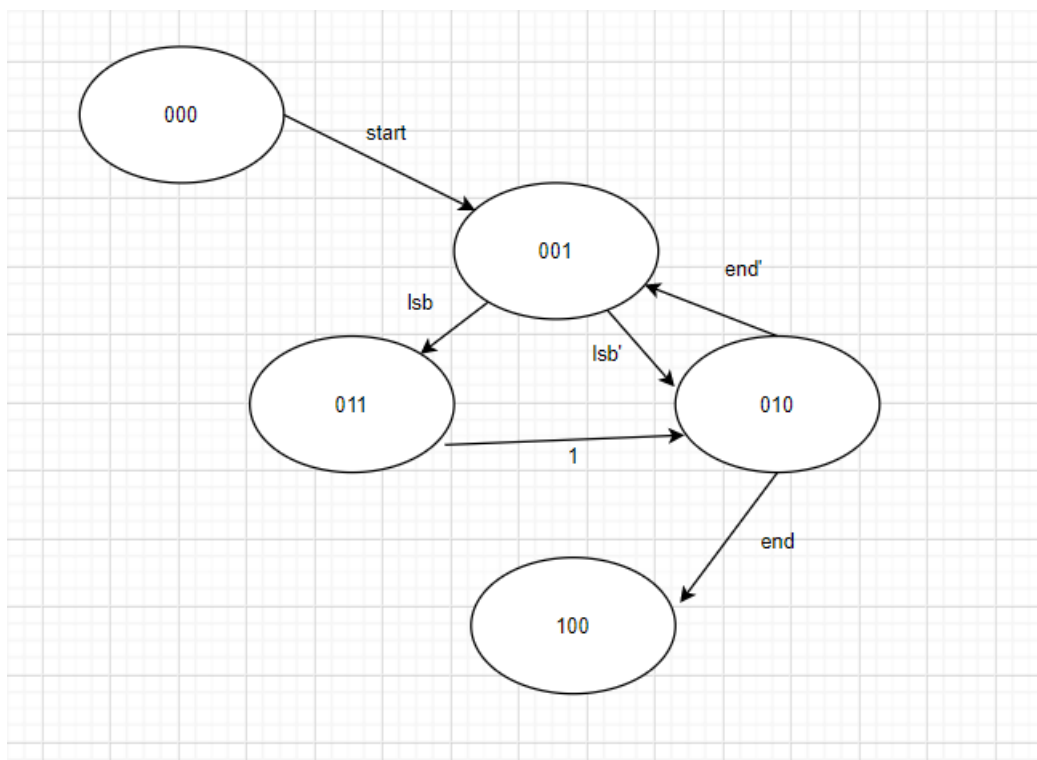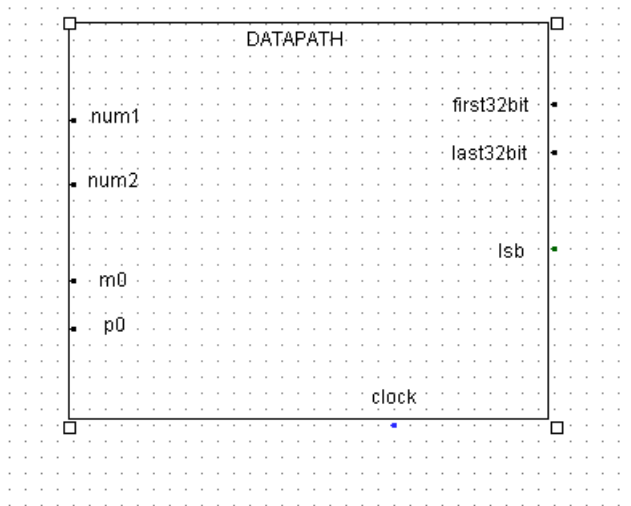
161044044

Components

Control_unit:

It has 2 output that have 2 bit p0 and m0 for choose operations on datapath

It has 2 input for choosing state

DFA for Control_unit

Datapath

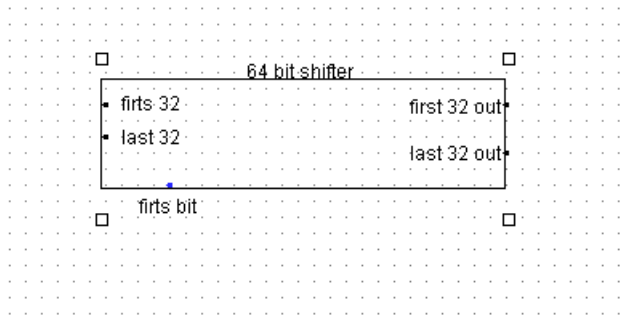It has for input for choose operations on datapath

Num1 and num2 is numbers that we multiply

İt has 3 output

Lsb for for choosing state of control unit

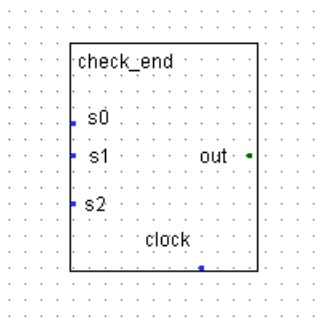Other 2 outputs are result

64 bit shifter

It has 2 inputs that are 32 bit and input is 1 bit

First 32 bit is first part of 64 bit number
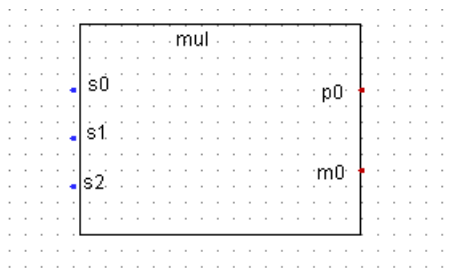
Last 32 bit is last part of 64 bit number

First bit input is firt bit of output you can chose is aritmetic or logical shift with using this bit
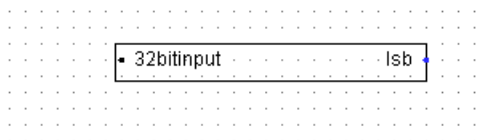

Check_end

It is a circuit in control unit it get state of control unit and say it is end of operations or not
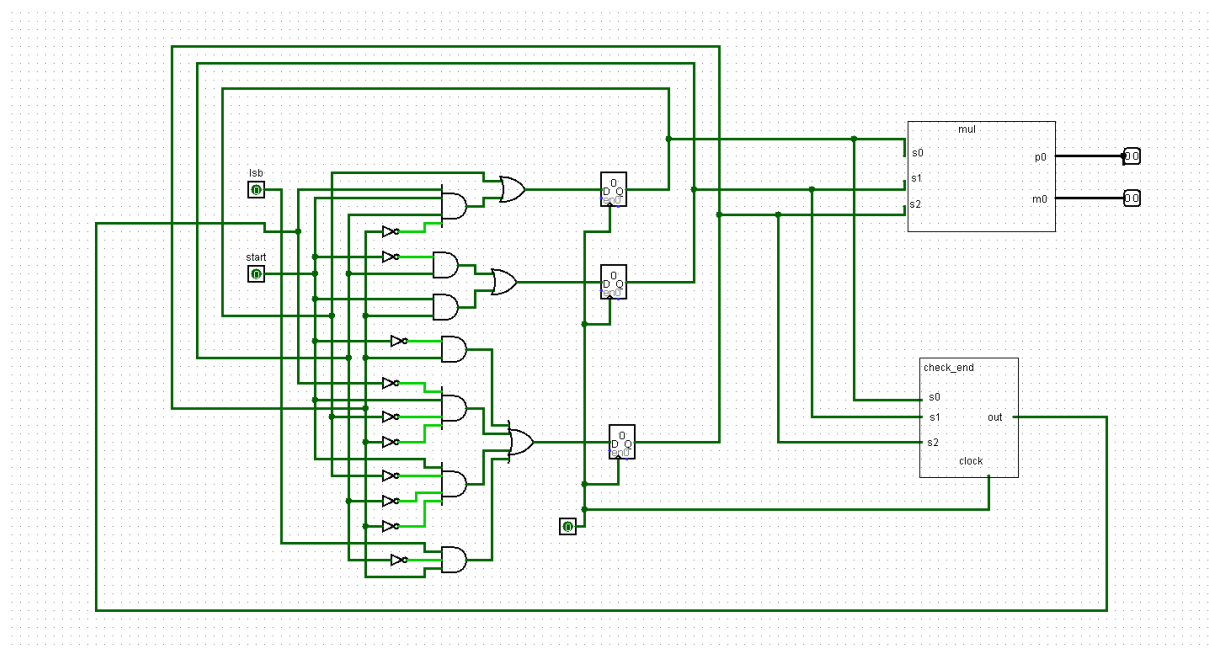
Choose

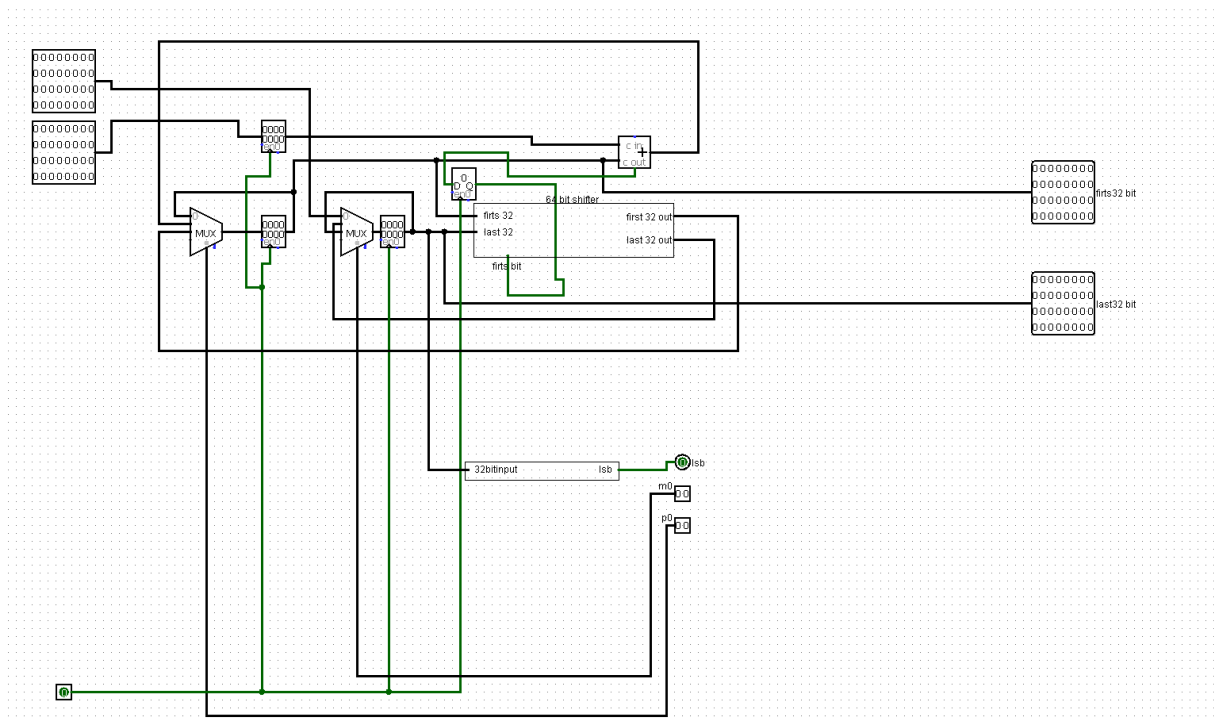It is a curciut in control unit it get state of control unit and choose what operations will do on datapath

getLSB

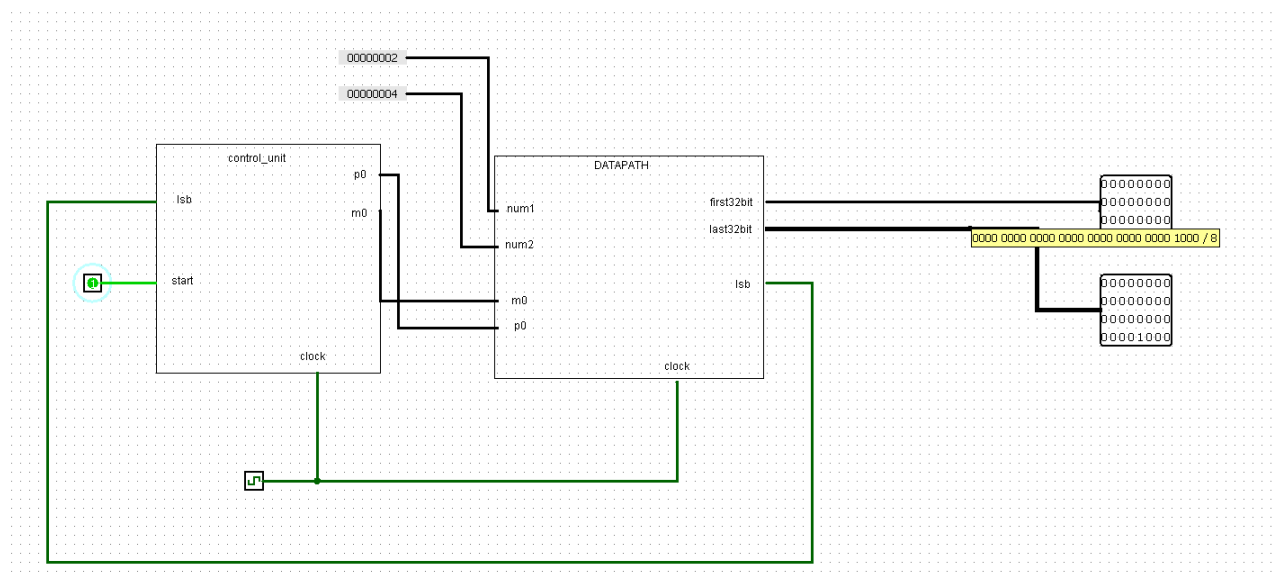It has 32 bit 1 input and return less significant bit of it
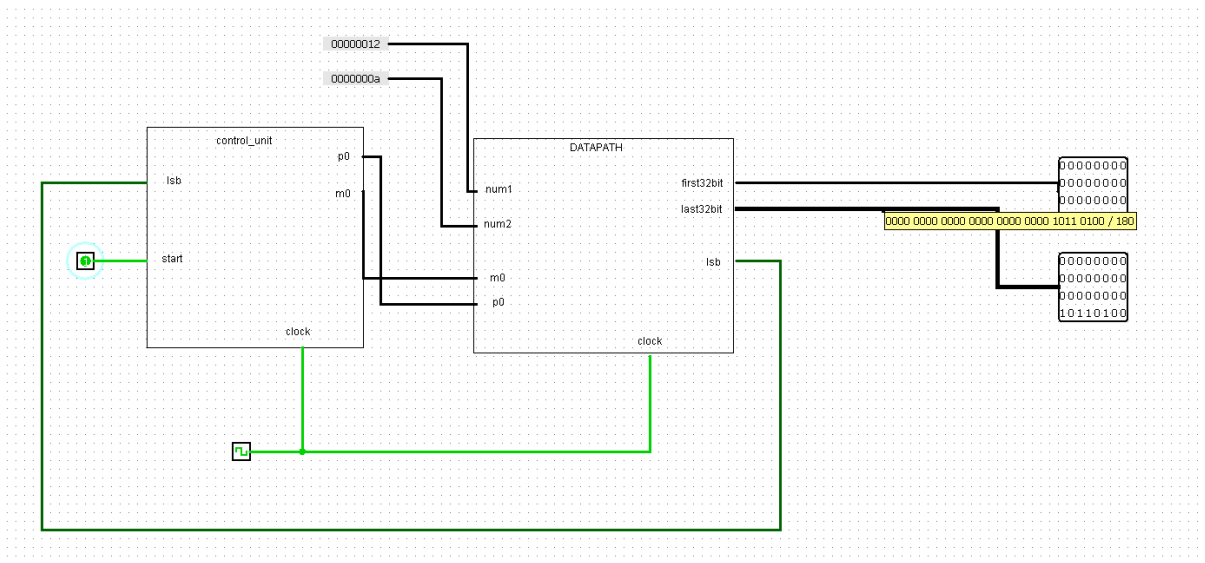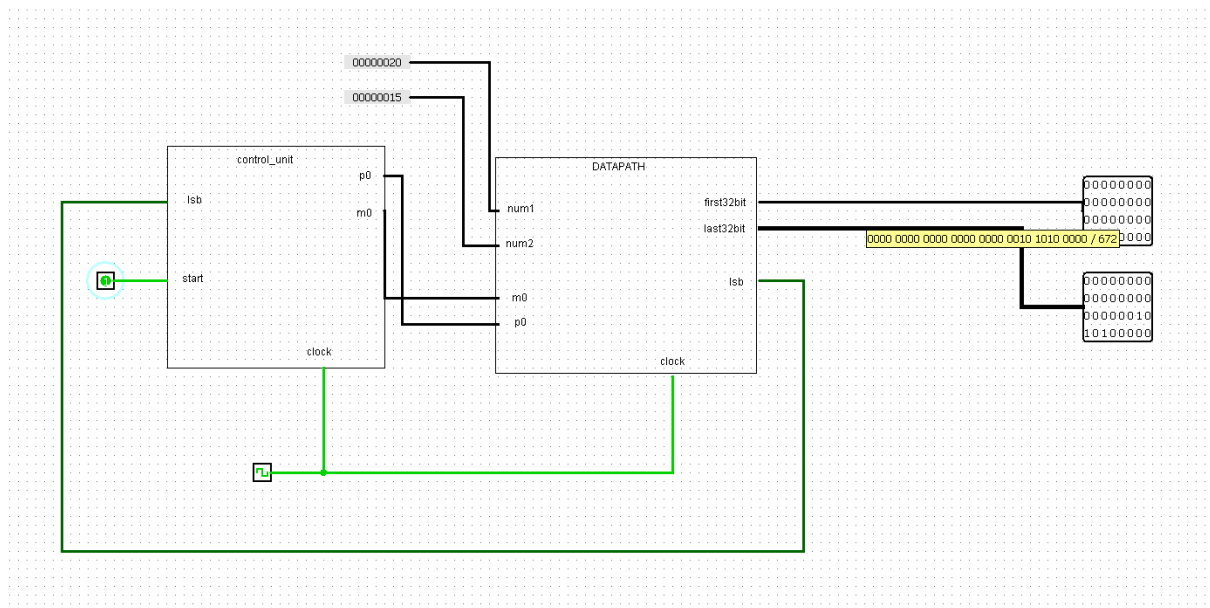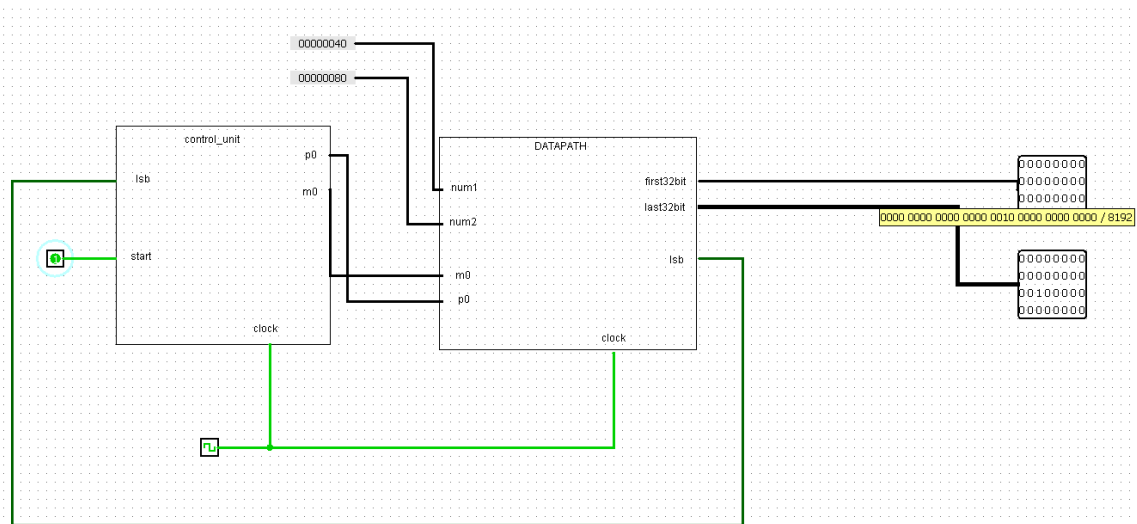
Control Unit

Datapath

Test Case Resulst:

It Shows us 4*2=8

It shows us 18*10=180

It shows 21*32=672

It shows us 128*64=8192
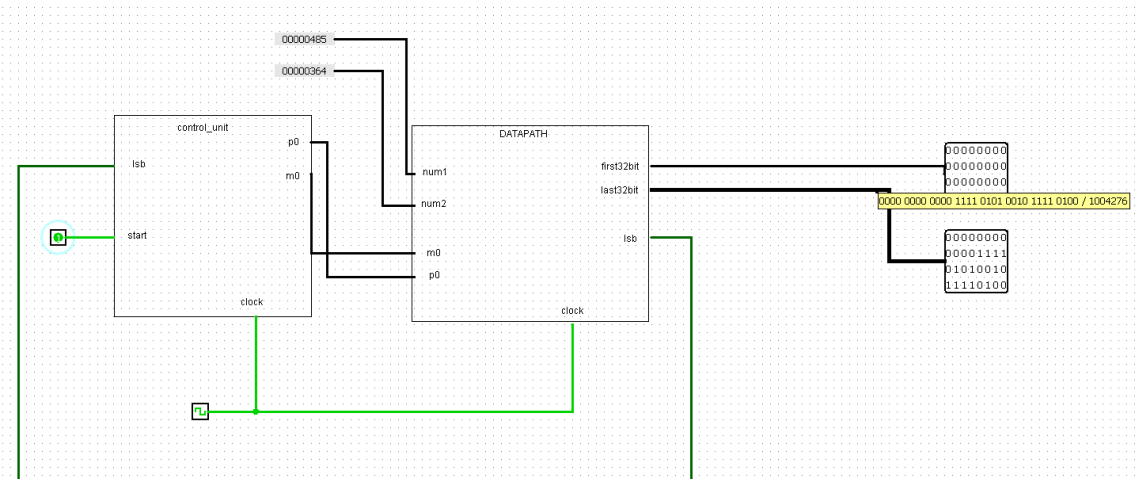
It shows us 1157*868=1004276
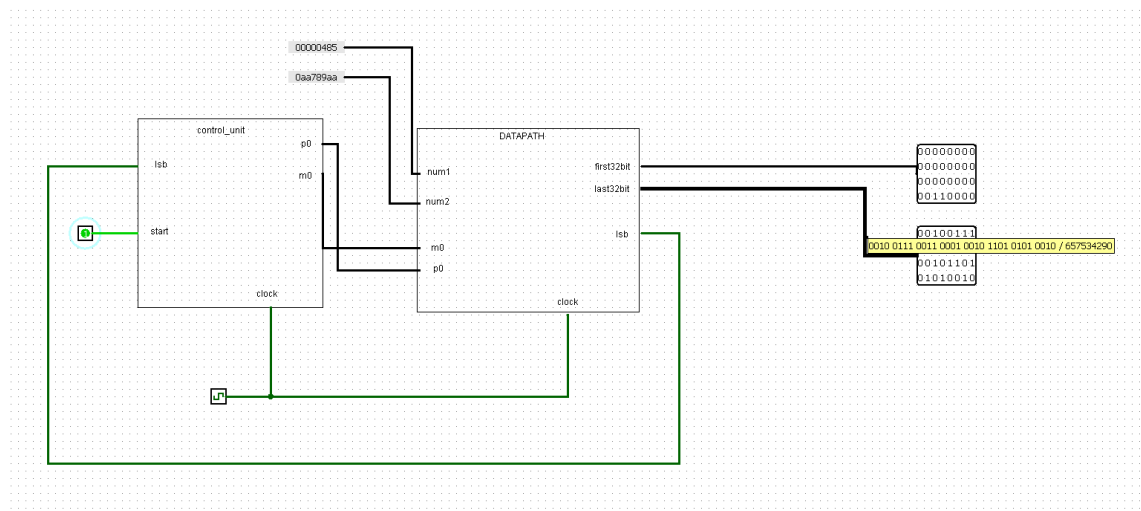
It shows us 178751914*1157=20815964498