Assignment 2
Group No - 4
Members : Ashrujit Ghoshal (14CS10060)
Sayan Ghosh (14CS10061)

RTL ASM Chart of radix 4 Booth's multiplier

n:No of bits

Start

LOAD
multiplicand,multiplier

0

Go

prd[n-1:0] <= 0
mplier[n-1:0] <= multiplier
mpcand[n-1:0] <= multiplicand
app<=0
count <= n

no   count = 0   Yes

over <= 1

1

Go

0

0   mplier[1]   1

00   mplier[0]||app

01
10

11

prd <= prd + 2*mpcand

prd <= prd + mpcand

00   mplier[0]||app   11

01
10

prd <= prd - 2*mpcand

prd <= prd - mpcand

app<=mplier[0]
prd <= shr(prd,prd[n-1])
mplier <= shr(mplier,prd[0])

app<=mplier[0]
prd <= shr(prd,prd[n-1])
mplier <= shr(mplier,prd[0])
count <= count - 1