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ID :
14481
Section :
BS(SE-4) (A)
Subject :
Comp Communication and Network
Submit to
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ID = 14481

Q1 In a block of addresses, we know the IP address of one host is 101.10.11.x/ID_{mis}. What are the first address (network address) and the last address (limited broadcast address) in this block?

Solution:

ID = 14481

X = 18

ID_{8+1} = 8+1 = 9

4^{th} = 8

5^{th} = 1

In a block address, we know the IP address is

101.10.11.18/9

Binary form =

01100101 00001010

00001011 00010010

i) Address Mask = 11

ii) First Address =

32-9 = 23

01100101 00000000

00000000 00000000

101.0.0.0

iii) Last Address

01100101 01111111

11111111 11111111

= 101.127.255.255

iv) No. of address in the block =

$2^{32-n} = 2^{32-9} = 2^{23} = 8388608$

OR

In a block of address we know the IP address is 101.10.11.18/19

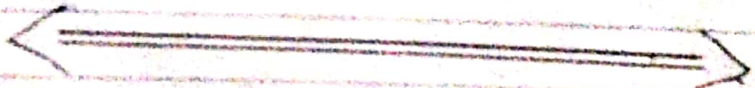
101.10.11.18/19

Can host first Address = 101.10.0.2

Network address = 101.10.0.1

Last Address = 101.10.11.480

Limited Address = 101.10.11.481



Q2. Take your Roll No as Decimal notation, now Convert it to Binary notation. Draw the graph of the NRZ-I Stream using the binary notation of your roll no as data stream, assuming that the last Signal level has been positive

Solution

ID = 14481

First Convert it into Binary

Binary is

01110001001001

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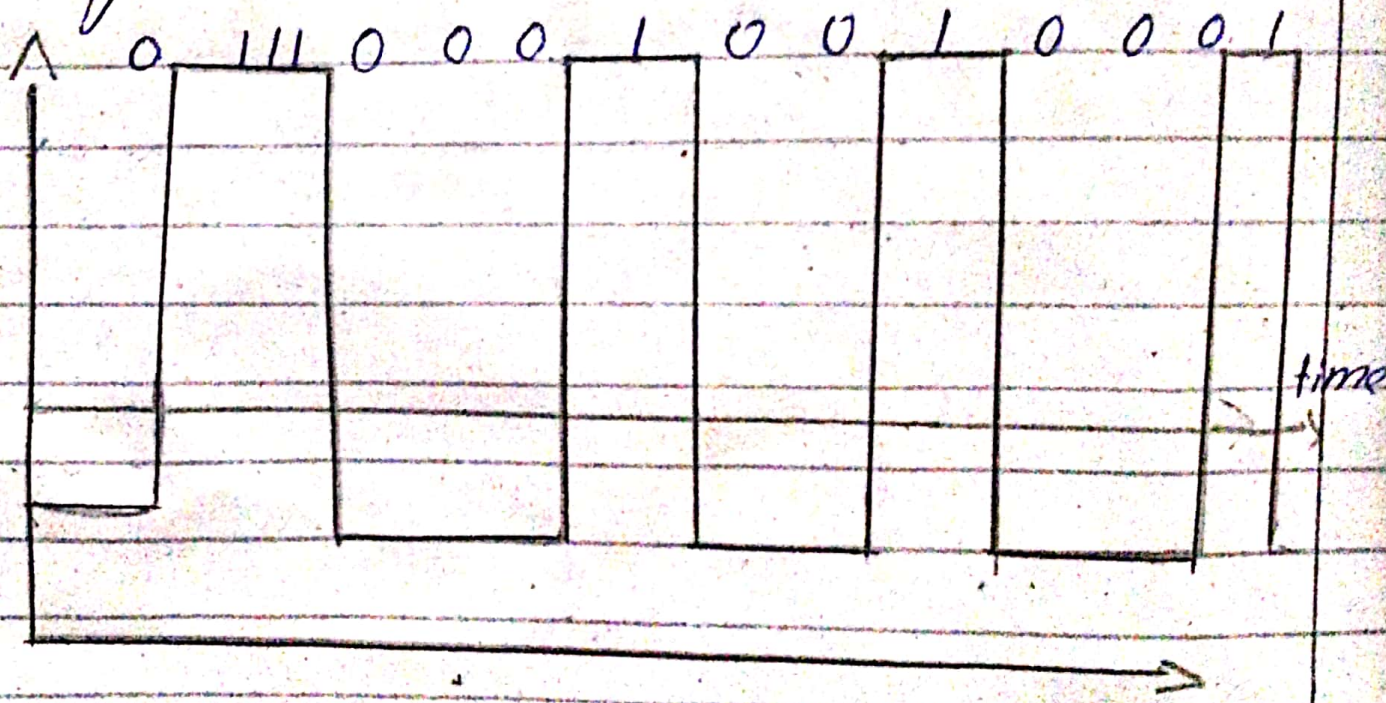
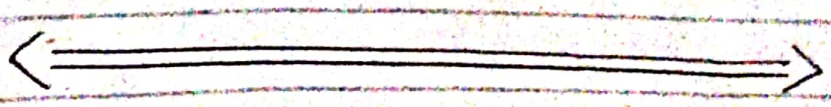
ID = 14481

Now Draw the Graph of NRZ-L Scheme of your Binary Data Scheme



Step :3

The last Signal has positive



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Q3 Two neighboring node (A & B) used a Sliding-window protocol with a 3-bit Sequence number. As the ARQ mechanism, go back-N is used with a window position size of 1 Last Assuming 5 of events.

Before A Sends any frames

a) Before A Sends any frames

ID = 14481

ID last is 1

$ID_{last} > 5$

$1 > 5$

window size = 4

Sender = [0 1 2 3] 4 5 6

window of PDU that may be transmitted = 4 bit window

Reciver

[0 1 2 3] 4 5 6

B) After A Sends frames 0, 1, 2, 3, 4, 5 and recieves acknowledge from B for 0, 1 and 2.

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After A Send
0, 1, 2, 3, 4 and
receives acknowledgement from
B for 0, 1, 2
Sender :
A has shrunk its
window as it has transmitted
5 PDUs but has received
ack for 3 PDUs hence
it is keeping copy of
one PDU

0 1 2 3 4 [5 6]

Acknowledge recieved for
two bits
Reciever :

0 1 2 3 4 [5 6]

Receiver has received all
data hence the window remaining
4 bit size

c) After A Sends frames 5, 6 and
B acknowledges 5 and the
ACK is received by A.

c) Sender

0 1 2 3 4 5 6 [8 10]

Reciever

Ack recieved for one bit

0 1 2 3 4 5 6 [8 10]

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Q4. An ISP is granted a block of address starting with 160.(x).ID(3+4).0/16
The ISP need to distribute these address to three group of Coustomer as follows
a) The first group has 16 customers each need 64 address

X ID = 14481

ID_{8+1} = 8+1 = 9

So

160.18.9.016

Graph 1

Customer → 0

001 = 160.18.9.0/26

Customer ....

0016 = 160.18.25.0/28

Customer

064 = 160.18.73.0/28

Total 16x64 = 1024

Availble address

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(b) The Second group has 64 customer each need 32 address.

Group 2:

Customer

017 = 160.12.26.0/27

Customer

064 = 160.18.73.0/27

Total = 2048

c) The third group has 64 customer each need 16 address

Customer01 =

160.18.74.0/26

Customer

102 = 160.218.102.0/26

Total = 1024

Number of allocated address

409

Number of available address = 3072

Dear Sir,

When I upload the Sessional assignment. it was Copied from Qazi Azmat Ali. I know but Sir in their time I was at critical Condition my mother Sister was dead therefor I can't write the assignment and Just copied. for that I am Sorry.

Thank you.