

Date:	29-05-2020	Name:	Poorvi j gowad
Course:	Logic design	USN:	4al17ec071
Topic:	Analysis of clocked sequential circuits, Digital clock design	Semester and section	6 th sem'B'section
Github repository:	Poorvi-2000		

ANALYSIS OF CLOCKED

upsctfever.com/upsct-fever/en/gatecse/en-gatecse-chp26.html

Similarly, states f and d are equivalent, and state f can be removed and replaced by d.

Reduced State Table

Present State	Next State		Output	
	x = 0	x = 1	x = 0	x = 1
a	a	b	0	0
b	c	d	0	0
c	a	d	0	1
d	a	d	0	1

In general reducing the number of states in a state table may result in a circuit with less equipments. But it does not guarantee a saving in the number of flip-flops or the number of gates.

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ANALYSIS OF CLOCKED

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Analysis of Clocked Sequential Circuits (with D Flip Flop)

STEP: 1 Find out the i/p & o/r eqn

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Analysis of Clocked Sequential Circuits (with JK Flip Flop)

Design Procedure for Clocked Sequential Circuits

Mealy & Moore Machines

Mealy and Moore State



Analysis of Clocked

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Neso Academy
610,850 views

STEP: 2 State table

Clock

$D = Q_{n+1}$

$Q_A^+ = D_A$
 $Q_B^+ = D_B$

$Q_A^+ = D_A = 1 \cdot 0 + 0 = 0$
 $Q_B^+ = D_B = 0 \cdot 0 + 0 = 0$

$Q_A^+ = D_B = \bar{A}AQB = 1 \cdot 0 = 0$
 $Q_B^+ = D_A = 1 \cdot 1 + 0 \cdot 0 = 1$
 $Q_B^+ = D_A = 0 \cdot 1 + 1 \cdot 0 = 0$

P.S.		x	N.S.		y
Q_A	Q_B		Q_A^+	Q_B^+	
0	0	0	0	0	1
0	0	1	0	0	0

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Digital clock

From Wikipedia, the free encyclopedia

This article is about the appliance. For timing reference for digital audio, see [Word clock](#).



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A **digital clock** is a type of clock that displays the time digitally (i.e. in numerals or other symbols), as opposed to an analogue clock, where the time is indicated by the positions of rotating hands.


Digital clocks are often associated with electronic drives, but the "digital" description refers only to the display, not to the drive mechanism. (Both analogue and digital clocks can be driven either mechanically or electronically, but "clockwork" mechanisms with digital displays are rare).


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- 3 Displays
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- 4 Uses of digital clocks
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Basic digital alarm clock without a radio. The mark in the top-left of the display indicates that the time is 4:00pm, not 4:00am.


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1:28 PM
5/29/2020



29/05/2020

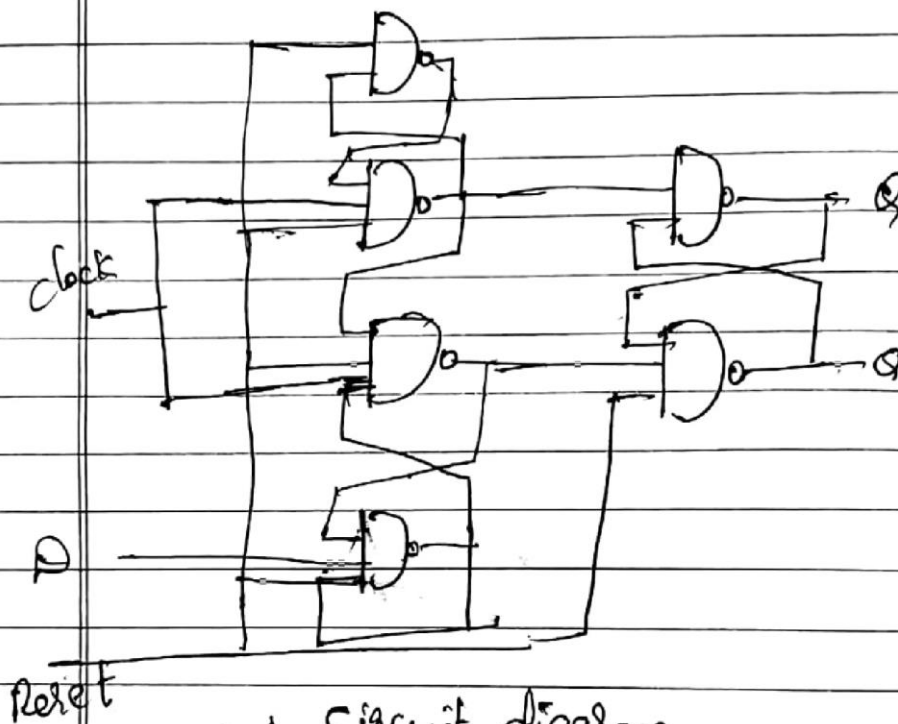
Logic Design

Day-2

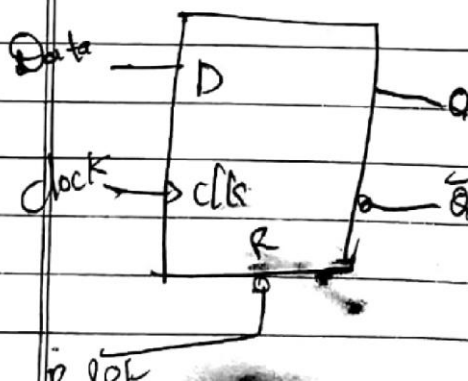
Analysis of clocked Sequential
Circuits and Digital clock design

Analysis of clocked sequential circuits

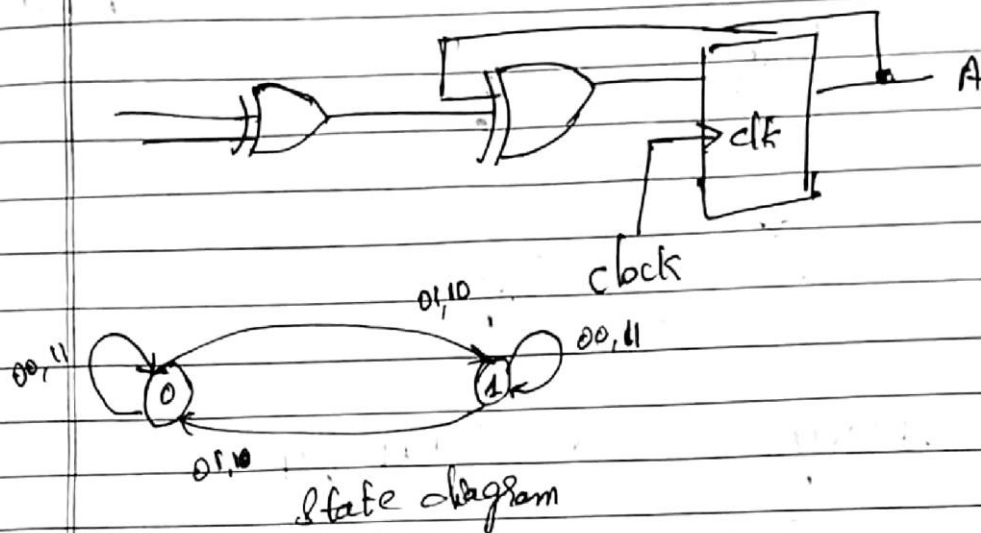
*positive edge triggered D Flip flop



• circuit diagram



Analysis of D Flip flop



Present state	Inputs	Next state
A	X Y	A
0	0 0	0
0	0 1	0
0	1 0	1
0	1 1	1
1	0 0	0
1	0 1	1
1	1 0	0
1	1 1	1

Analysis with JK flip-flops

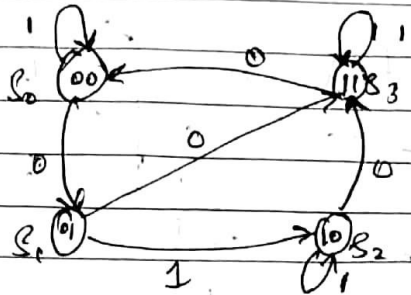
$$J_A = B', K_A = Bx'$$

$$J_B = x', K_B = A'x + Ax' = A \oplus x$$

$$= A(t+1) = J_A' + K_A'A$$

$$= B(t+1) = J_B' + K_B'B$$

$$= B(t+1) = x'B + (A \oplus x)'B = B'x' + ABx + A'Bx'$$



Analysis with T flip-flops

$$= Q(t+1) = T \oplus Q = T'Q + TQ'$$

$$= T_A = Bx$$

$$= T_B = x'$$

$$= y = AB$$

$$= A(t+1) = (Bx)'A + (Bx)A' = AB' + Ax' + A'Bx$$

$$= B(t+1) = x \oplus B$$

Digital clock design

A digital clock is a type of clock that displays the time digitally, as opposed to an analogue clock, where the time is indicated by the positions of rotating hands.

Date:	29-05-2020	Name:	Poorvi j gowda
Course:	Python programming	USN:	4al17ec071
Topic:	Objectoriented programming	Semester and section:	6 th sem b sec

189. Object Oriented Programming Explained

```

14=Label(window, text="ISBN")
14.grid(row=1, column=2)

title_text=StringVar()
e1=Entry(window, textvariable=title_text)
e1.grid(row=0, column=1)

author_text=StringVar()
e2=Entry(window, textvariable=author_text)
e2.grid(row=0, column=3)

year_text=StringVar()
e3=Entry(window, textvariable=year_text)
e3.grid(row=1, column=1)

isbn_text=StringVar()
e4=Entry(window, textvariable=isbn_text)
e4.grid(row=1, column=3)

list1=Listbox(window, height=6, width=35)
list1.grid(row=2, column=0, rowspan=6, colspan=2)

sb1=Scrollbar(window)
sb1.grid(row=2, column=2, rowspan=6)

list1.configure(yscrollcommand=sb1.set)
sb1.configure(command=list1.yview)

```

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192. Creating a Bank Account Object

```

class Account:
    def __init__(self, filepath):
        self.filepath=filepath
        with open(filepath, 'r') as file:
            self.balance=int(file.read())

    def withdraw(self, amount):
        self.balance=self.balance - amount

    def deposit(self, amount):
        self.balance=self.balance + amount

    def commit(self):
        with open()

account=Account("account//balance.txt")
print(account.balance)

```

```

PS D:\Dropbox\pp\classes\Demo> python account\acc.py
1000
PS D:\Dropbox\pp\classes\Demo> python account\acc.py
1000
PS D:\Dropbox\pp\classes\Demo> python account\acc.py
900
PS D:\Dropbox\pp\classes\Demo> python account\acc.py
1000
PS D:\Dropbox\pp\classes\Demo>

```

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```

27 self.title_text=StringVar()
28 self.e1=Entry(window,textvariable=self.title_text)
29 self.e1.grid(row=0,column=1)
30
31 self.author_text=StringVar()
32 self.e2=Entry(window,textvariable=self.author_text)
33 self.e2.grid(row=0,column=3)
34
35 self.year_text=StringVar()
36 self.e3=Entry(window,textvariable=self.year_text)
37 self.e3.grid(row=1,column=1)
38
39 self.isbn_text=StringVar()
40 self.e4=Entry(window,textvariable=self.isbn_text)
41 self.e4.grid(row=1,column=3)
42
43 self.list1=Listbox(window, height=6,width=35)
44 self.list1.grid(row=2,column=0,rowspan=6,columnspan=2)
45
46 sb1=Scrollbar(window)
47 sb1.grid(row=2,column=2,rowspan=6)
48
49 self.list1.configure(yscrollcommand=sb1.set)
50 sb1.configure(command=self.list1.yview)
51
52 self.list1.bind('<<ListboxSelect>>',self.get_selected_row)
53
54 b1=Button(window,text="View all", width=12,command=self.view)
55 b1.grid(row=2,column=3)
56
57 b2=Button(window,text="Search entry", width=12,command=self.search)
58 b2.grid(row=3,column=3)
59
60 b3=Button(window,text="Add entry", width=12,command=self.add)
61 b3.grid(row=4,column=3)
62
63 b4=Button(window,text="Update selected", width=12,command=self.update)
64 b4.grid(row=5,column=3)
65
66 b5=Button(window,text="Delete selected", width=12,command=self.delete)
67 b5.grid(row=6,column=3)
68

```

Activate Windows
Go to Settings to activate Windows.



1

2

3