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HR MIN SEC MS

# DIGITAL CLOCK

Presentation

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# Our Team



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# Analog clock

Christian  
Huygens

An analog clock is a clock or watch that has moving hands and (usually) hours marked from 1 to 12 to show you the time.

## Intro

## Application

Analog signals are commonly used in communication systems that convey voice, data, image, signal, or video information using a continuous signal.

## Drawback

Drawback of analog clocks is that not everybody can tell time.

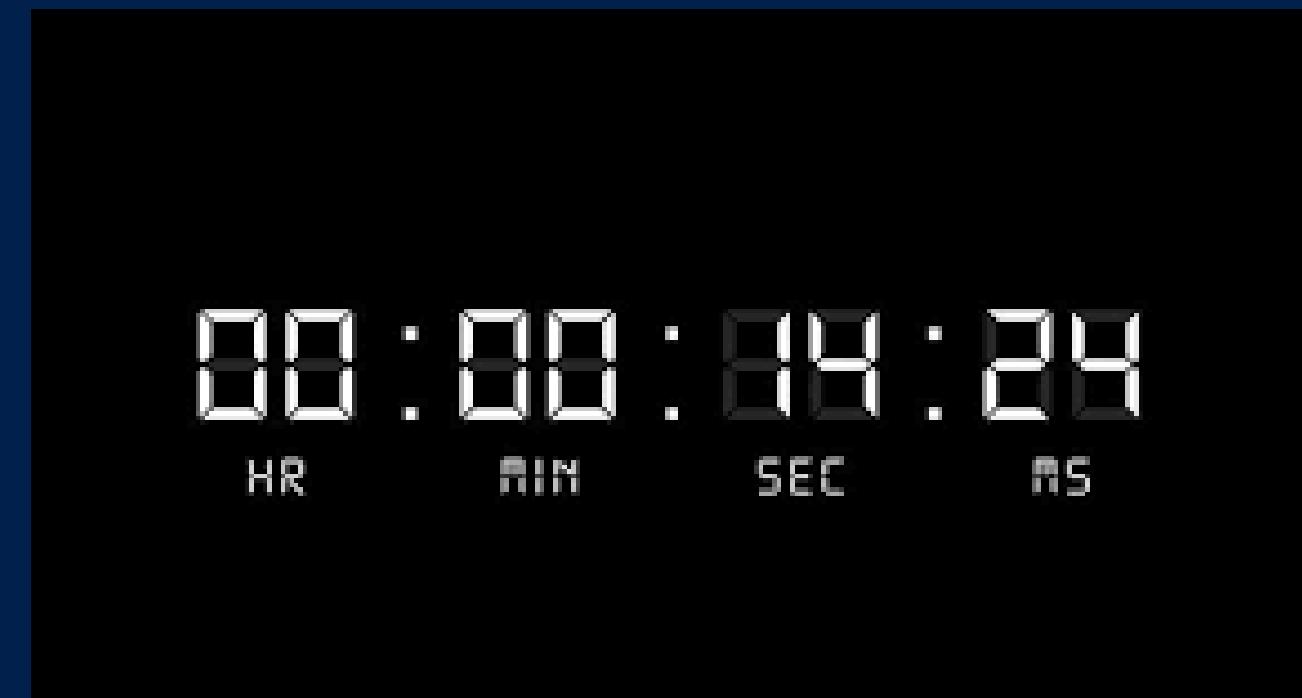


# INTRODUCTION

D.E Protzmann

## Digital clock

A digital clock is an alternative to a traditional analogue clock. This type of clock shows numbers to display the time in a digital format, such as on a watch, phone or an alarm clock.



A digital clock displays the time directly. It shows the time in numerals or other symbols. It may have a 12 hours or 24 hours

# Components Used

1N4007 Diode

7490 Decade  
counter

1k Resister

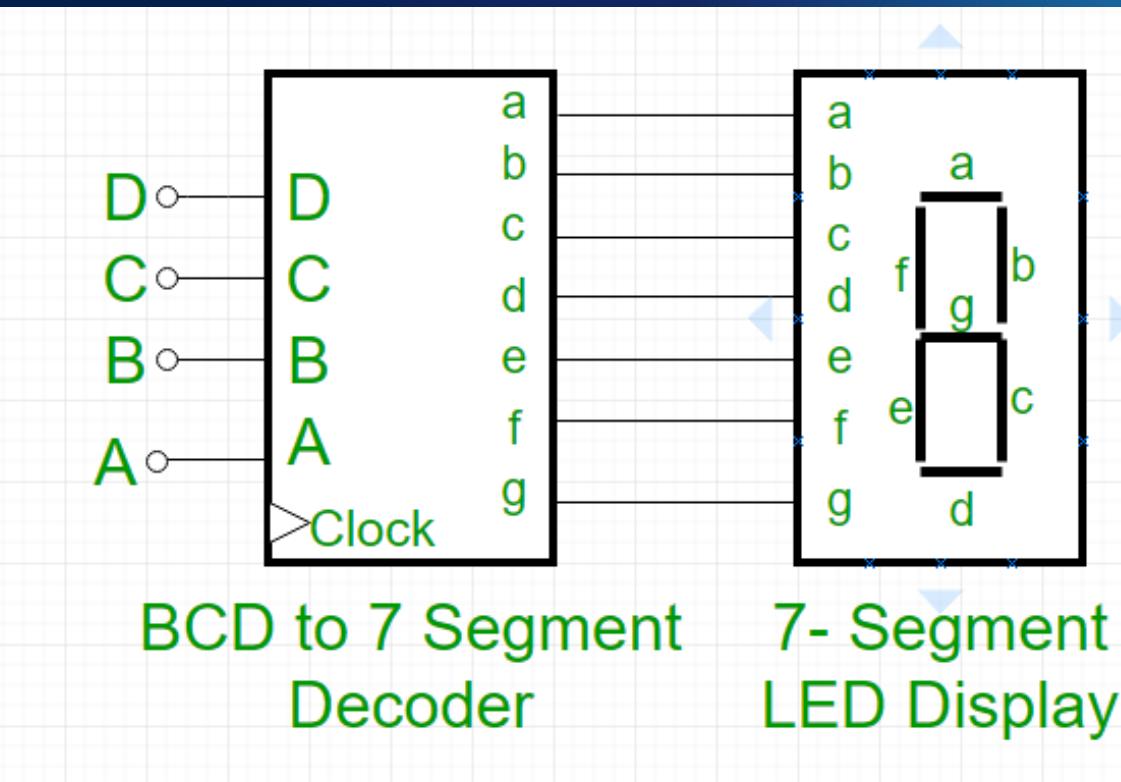
7 segment BCD  
Display

SW SPDT Switch

SPDT push  
Button

# 7 Segment BCD Display

- a combinational logic circuit that accepts a decimal digit in BCD (input) and generates appropriate outputs for the segments to display the input decimal digit.
- According to the type of application, there are two types of configurations of seven-segment displays: common anode display and common cathode display.



# 1N4007 Diode

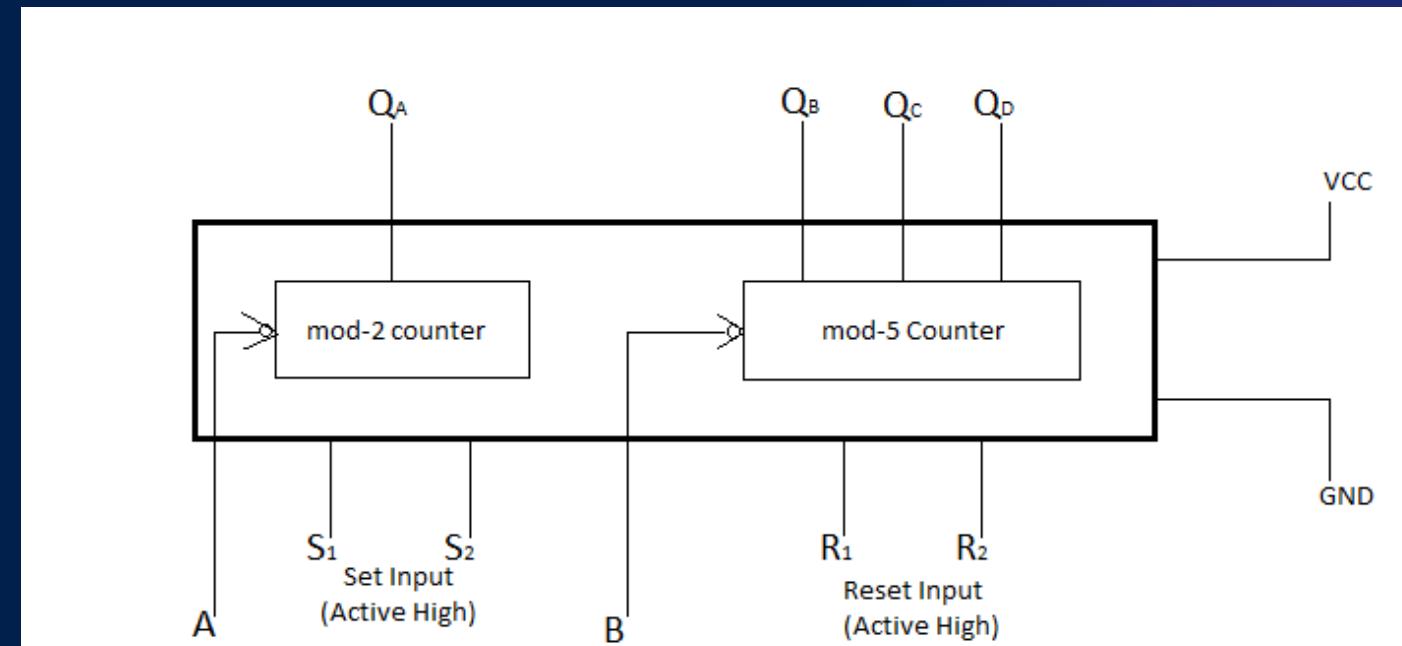
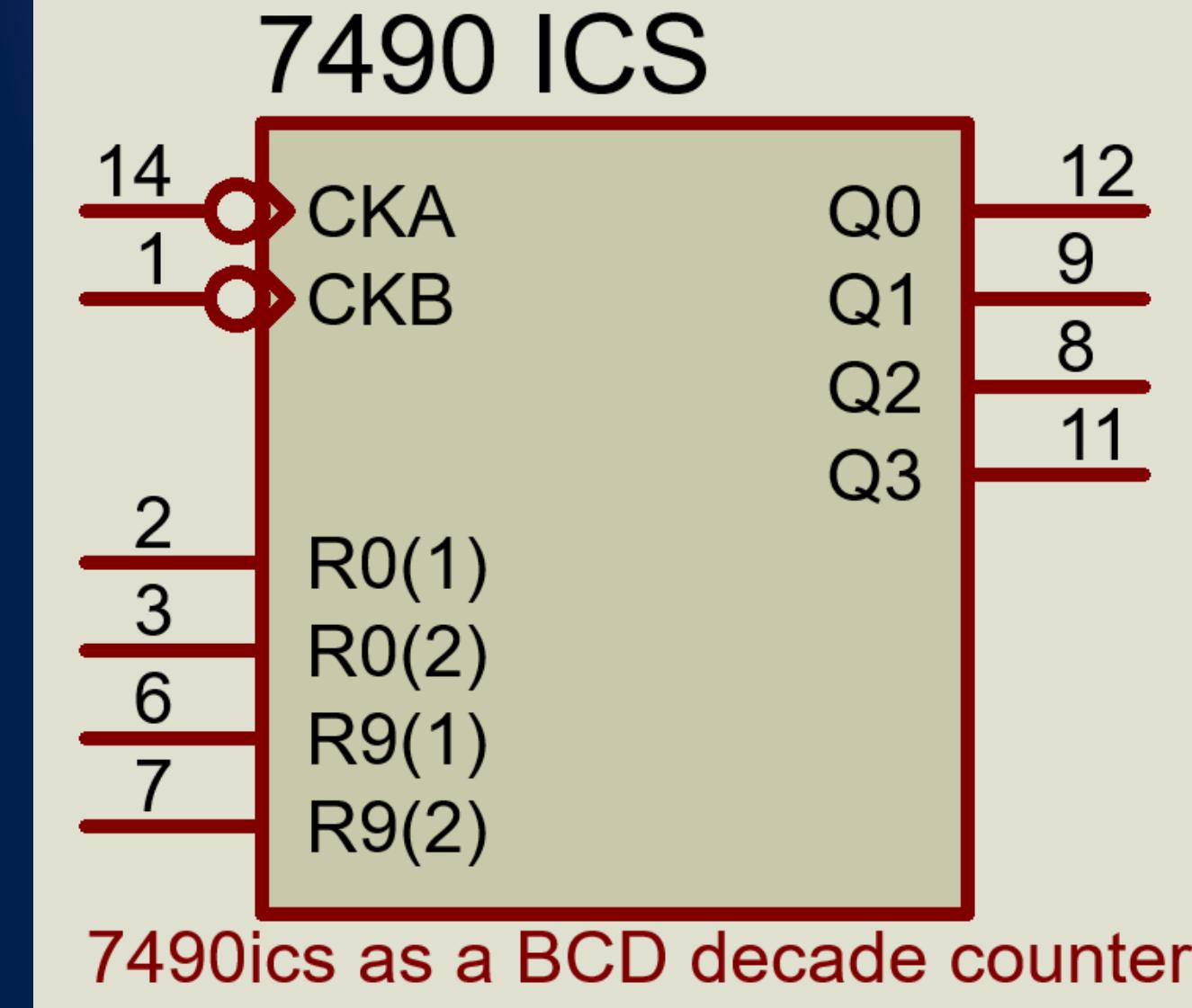
- The 1N4007 is the most commonly used rectifier diode.
- It is commonly used in rectifier circuits, protection circuits and regulator circuits.
- in this diode, current is allowed to flow only from anode to cathode .

**IN4007 DIODE**



# 7490 Decade Counter

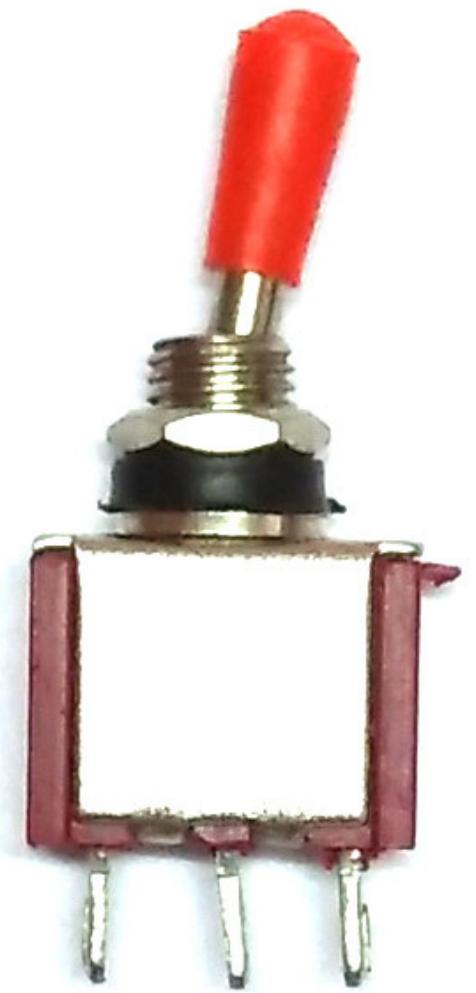
- A decade counter counts in a sequence of ten and then returns back to zero after the count of nine.
- It consists of four master/slave flip-flops, which are internally connected to form a divide-by-two section and a divide-by-five section.
- A decade counter is also known as a Modulo-10 Counter as it has 10 states.



BLOCK DIAGRAM OF ICs 7490

# SW SPDT Switch

- The SPDT stands for Single Pole, Double Throw.
- This switch is used to control two different circuits through a similar single input.
- There is one common terminal on the switch where the voltage and current is applied and that voltage and current can be either directed to the normally open or normally closed terminal.



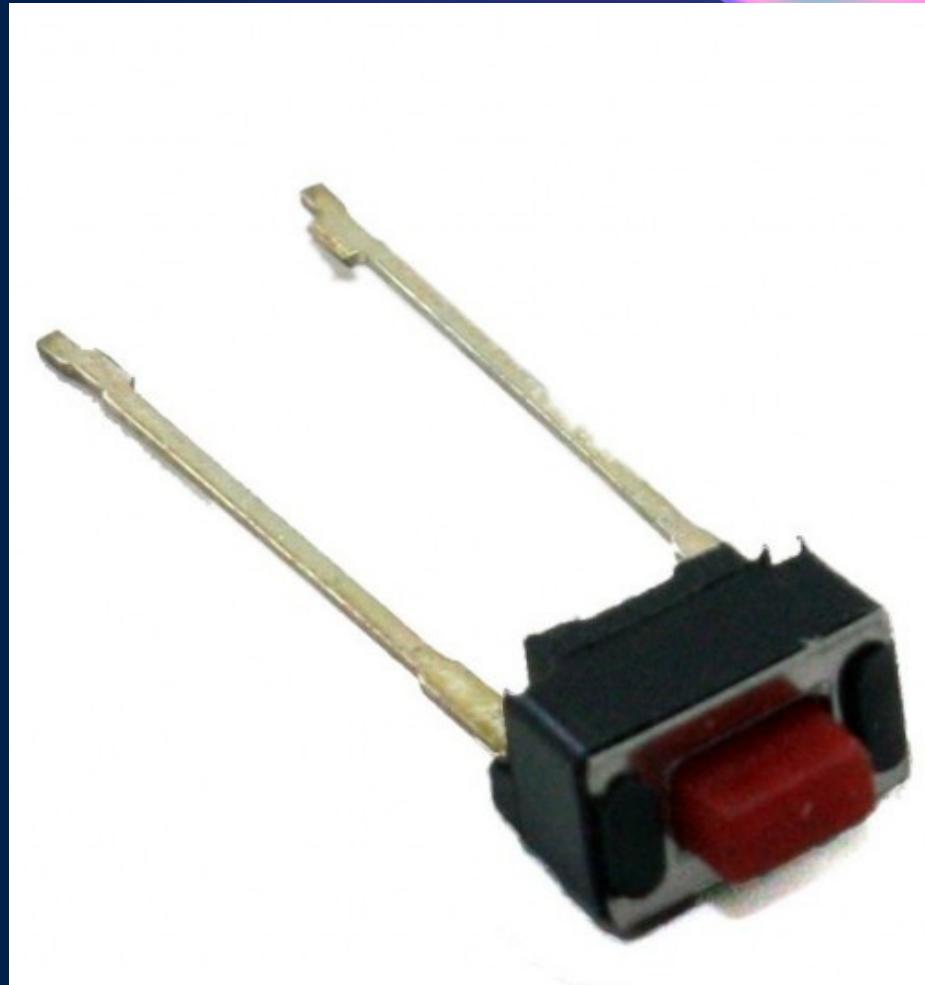
# 1K Resistor

- The 1k resistor is a pull-down resistor.
- It is meant to pull the base of the transistor to a known state (ground) when the control signal is missing/open/high input.
- Commonly used in breadboards and other prototyping applications, these 1K ohm resistors make excellent pull-ups, pull-downs and current limiters.

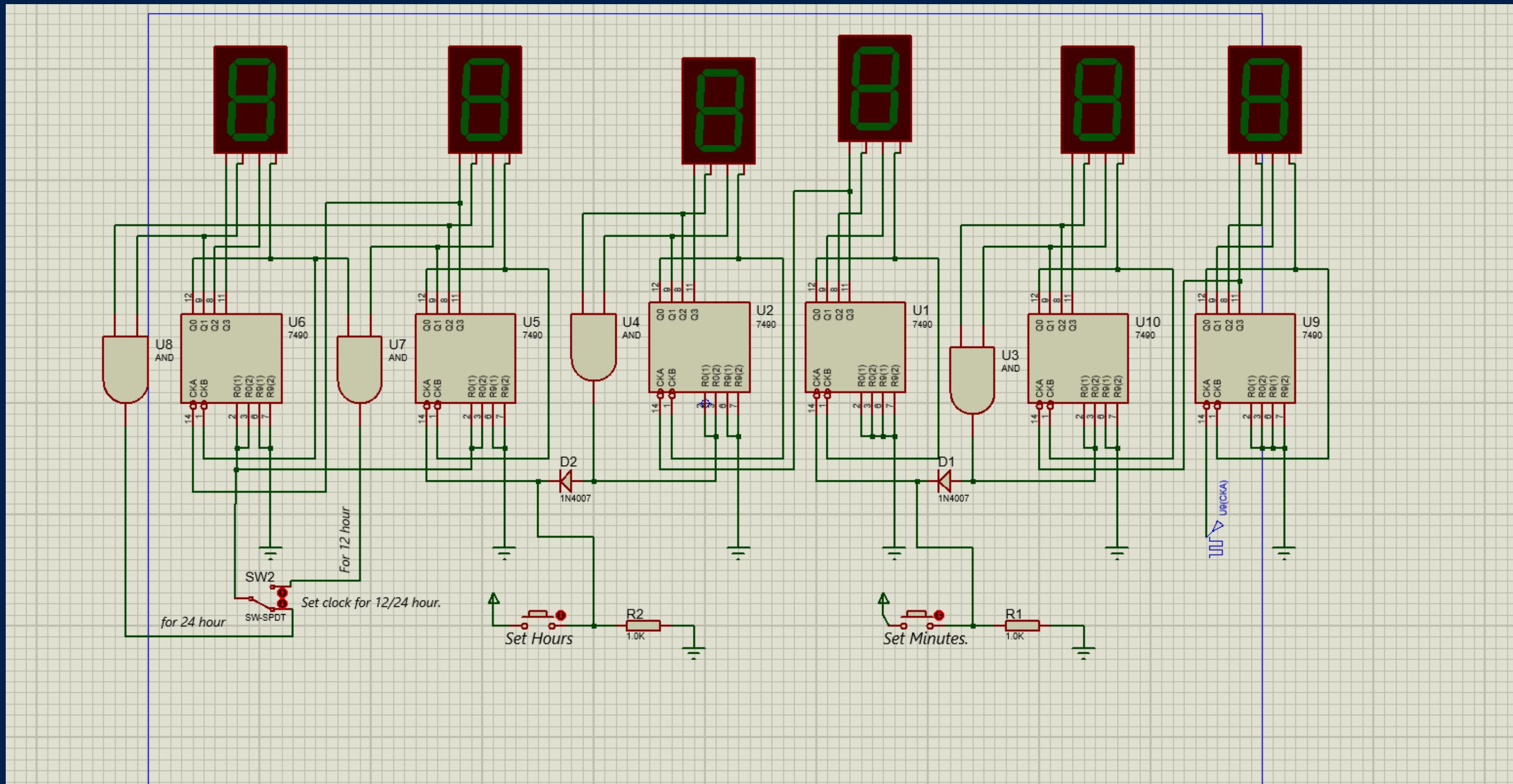


# SPDT push Button

- A push button switch is a mechanical device used to control an electrical circuit in which the operator manually presses a button to actuate an internal switching mechanism.
- The Pushbutton switches are a special type of switches that help to control the various processes or the different types of actions in any machine.



# Design & working



# Applications

- Digital clocks can be very small and inexpensive devices that fulfil the our requirements.
- It is used to set alarms, add timers, stop watch .
- It is used set date and time in our mobile phone.
- It is also used in cars, radios, microwave ovens computers , cell phones etc.

# Question / Answer



thank you

Mostly Thanks to Er. Kamal Lekhak sir  
for this oppourtunities.😊