

Date:- 29/5/20

Course:- Logic design

Topic:- Digital clock design

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Sem:- 6th sem

Sec B section.

- * Behaviour of clocked sequential circuits is determined from its input, outputs and state of flip-flops
- * The analysis of a clocked sequential circuit consists of obtaining a truth table or diagram of time sequence of inputs and states
- * The clocked sequential circuits have flip-flops or gated latches from memory elements. There is a periodic clock connected to clock inputs of all the memory elements of the circuit to synchronize all the internal changes of state
- * The digital clock, that is usually provided by a crystal which is made out of quartz.
- * Because electric charge passes through a crystal, it will change shape slightly & make a very light sound. The sound which is heard at a regular frequency is then converted into an electronic signal
- * An analog watch might be much more accurate than digital one if it uses a high precision movement to measure passing time.
- * Generally the most expensive watches in the world are analog ones, ~~the~~ with digital displays.

* Generating the time in BCD.

→ 555 timer is used, counter & decoders are used, by this counter produces 0-9 counts

→ This is converted into 7 segment output using 7447 decoder then to the 7 segment.

Date:- 29 May 20

Topic:- Python

topic:- Object oriented programming.

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Sec B section.

- * One of the popular approaches for solving the programming problem is by creating objects. This is called as [OOP] object oriented programming.
- * The concept in ^{OOP in} python focuses on creating reusable code. This concept is also known as DRY (Don't Repeat Yourself).
- * In python, the concept of OOP follows some basic principles.
→ Inheritance → Encapsulation → Polymorphism
- * In python there are some of the terminologies which is there in OOPs also, they are classes, objects, Data member, Inheritance, Instantiation.
- * Class attributes are variable of a class that shared between all its instances. They differ from instance attributes.
- * `"__init__"` is a reserved method in python classes.
- * `__del__()` this is known as destructor method in python.
- * Python objects have an attribute called `__doc__` which

provides documentation of objects.

- * Instance variables are owned by instances of the class. Unlike class variables are defined within methods.
- * The main advantages of OOP is that reduces the number of lines in the code and also makes the code more readable.
- * Client-server systems, object-oriented database, Real time system design etc.