****

Week 3:

Aim: SEQUENTIAL CIRCUIT DESIGN

Flip-flops: SR, JK, D, and T types, and their truth tables, shift registers and counters (up/down counters),

verilog implementation of sequential circuits, state transition diagrams and state tables.

1.1 Concepts

Study the following concepts

1.Flip-flop theory: In resources of week-1 [Introduction to Sequential Circuits | Digital Electronics](https://www.youtube.com/watch?v=fLN1YOmuAr8&list=PLwjK_iyK4LLCCpnnybEztvRqxpMyfgarS)

2.Counters:

[Introduction to Counters | Types of Counters | Application of Counters](https://youtu.be/AKe2T5BkI1U?si=OdhlTSXE2WvIgBqo)

[Asynchronous Counters (Ripple Counters) Explained | Binary Up/Down Ripple Counters](https://youtu.be/fyagSrWSWbc?si=t1FfKSzWGRGJm3X_)

3.Shift Registers:

[Introduction to Registers | What is Shift Register? Types of Shift Registers](https://youtu.be/bAQfPQqKCHs?si=eCiTFg9ZQV7nazMm)

[Shift Register : Serial In Serial Out (SISO) Register Explained | Bidirectional Shift Register](https://youtu.be/r4bfEqZNSyo?si=yJ6ezRg8wGBwbBLP)

1.1 Resources

Go through the pdf.in resources in Week-3 section

(May look long enough but you can just skip the topics that are irrelevant!)

[Resources](https://drive.google.com/drive/folders/1Wv4LLSy_wQAyH5E8GnhLvmfeyVIQcVjK)