

1st Home Assignment
1. List several software process paradigms.

- Waterfall model
- Prototyping model
- Incremental model
- Spiral model
- V-model
- Agile model
- RAD model
- Component-Based Development model
- Big Bang model

2. Explain how both waterfall & prototyping model can be accommodated in the spiral process model.

Waterfall in spiral model

- Each loop of the spiral follows :-
planning → Analysis → Design → Implementation → Testing.

• Structured approach resembles the waterfall model

Prototyping in spiral model

- During the first analysis phase, prototype

- clarify requirements

- Reduce technical risks.

Reflects the prototyping model, especially when requirements are unclear.

3. Which is more important - the product or the process?

Both are important but process is more important than the product.

- A good process leads to

- High quality products

- predictable timelines

- Better cost control.

- poor process can result

- Delays

- Defects

- project failure.

4. Identify the umbrella activities in the software engineering process.

1. Project Management

2. Risk management

3. Software quality Assurance

4. Technical Review

5. Configuration Management

measurement and metrics

5. Define a software process model & clarify the different types of process models with real-world example.

→ A software process model is a structured framework that defines the sequence of activities required to develop, deliver, and maintain software.

1. Waterfall model - Banking software where requirements are fixed and well-defined.

2. Prototyping model
• A prototype is built app ui

3. Incremental model -
E-commerce website where features like login, cart, and payment are added.

4. Spiral model -
large defence or healthcare systems involving high risk.

K.S. D. 19/10/2026