Flow-oriented models in software engineering represent the behavior of a system by focusing on the flow of data or control between different components or modules. Unlike class-based modeling, which emphasizes the structure of the system through classes and objects, flow-oriented models emphasize the dynamic aspects of the system's behavior. Here are some key points about flow-oriented models:

1. **Data Flow Diagrams (DFDs)**: DFDs are a graphical representation technique used to model the flow of data within a system. They depict how data moves through processes, stores, and external entities. DFDs consist of interconnected bubbles (representing processes) and arrows (representing data flows). The emphasis is on showing how data is transformed and manipulated as it moves through the system.
2. **Flowcharts**: Flowcharts are another graphical representation technique used to model the flow of control or logic within a system. They depict the sequence of steps or actions that occur in a process or algorithm. Flowcharts consist of various symbols such as rectangles (for processes), diamonds (for decisions), and arrows (for control flow). Flowcharts are often used to represent procedural logic and algorithmic processes.
3. **Petri Nets**: Petri Nets are a mathematical modeling technique used to represent concurrent systems. They consist of places (representing states or conditions), transitions (representing events or actions), arcs (representing the flow of tokens between places and transitions), and tokens (representing the state of the system). Petri Nets are particularly useful for modeling systems with concurrency, synchronization, and resource sharing.
4. **State Transition Diagrams (STDs)**: STDs are used to model the behavior of systems that can be in different states and transition between states in response to events. They consist of states (representing the different conditions or modes of the system) and transitions (representing the events or actions that cause the system to change state). STDs are particularly useful for modeling finite-state machines and reactive systems.
5. **Process Models**: Process models, such as Business Process Models (BPMs) or Workflow Models, are used to represent the sequence of activities or tasks that occur within a business process or workflow. They depict how work is performed, who is responsible for each task, and how tasks are coordinated and managed. Process models are often used in business process management (BPM) and workflow automation.