**1. Barnes are Nobel Bookstore: Entities: customer, librarian, books Attributes of a customer: A customer with different tastes of reading preferences, customer name, age and profession. Attributes of a librarian: Knowledgeful person, guiding the customers in selecting books, keeing records of outgoing and incoming books. Attributes of a Book: Author, year, edition, genre, price, publisher details Activities: Accept request for books, present the quotation of book, prepare the delivery mode and payment channel. Events: dispatch of clients book to their location, checking the condition of book before dispatch , replacing any damaged books State variables: number of books, number of books per genre, number of customers, number of suppliers of books.**

**2. Movie Theatre:**

**Entities: Theatre, audience, bookie**

**Attributes of an audience: An audience with different age groups and gender preferring to watch a movie.**

**Attributes of a Theatre: Theatre timings, Genre of movie, cost per ticket, Rating of Theatre Attributes of a Bookie: Payment mode (online/offline), cashback/offers, type of seats preferred, timing of movie.**

**Events: dispatch of tickets details to the registered mobile or via app, arranging the audience for the movie, giving break in the middle of a movie.**

**Activities: Publish the details to the movie to be screened, provide the details of the movie timings, ratings of the movie, Giving the consumers the chances to make online payment or offline payment.**

**State variables: number of movies to be screened, number of audience expected, revenue generated.**

**3. A Laundromat:**

**Entities: customer, washing machines, staff.**

**Attributes of a customer: customer name, location, types of clothes to be washed Attributes of a washing machine: simple wash (or) wash and rinse, dry wash or wet wash, fast mode or sports mode.**

**Attributes of an staff: quick, consistent, accountable, skilled in fixing and set up of washing machines.**

**Activities: clean clothes, split dresses by their colors and type of fabric, accept payments from customers through cash/credit.**

**Events: collection and dispatch of clothes from client location , check for damages in the clothes,.**

**States variables: number or customers per day, number of washing machines in working condition , calculation of profit earned per clothing per day basis.**

**4. A Wal-Mart Super Market: Entities: consumer, biller, dispenser, retailer. Attributes of a consumer: consumer name, age, gender, contact info etc. Attributes of a biller: quicker, trustworthy, liable, expert in calculations. Attributes of a distributor: prompt, trustworthy, experience, areas of distribution, convincing product to customer. Attributes of a salesperson: type of product sold, sales expert, years of experience in sales. Activities: dispatch products to clients location, systematize the supermarket items, help customers to choose good product. Events: selection/ordering of products, packing of products/goods, check for any defects/damages before sale/dispatch. State variables: number of customers who prefer cash or credit card, number of clients waiting for a particular time in queue, number of products sold per day. 5. An emergency room: Entities: Specialists, nurse, patient, tools. Attributes of a Specialists: Knowledgeful resource, professional in his/her field, intellectual. Attributes of a nurse: helping hand for needy patients, expert in handling patients, accountable. Attributes of the tools: high cost equipments, accurate machines, clean and hygiene. Activities: immunize, provide treatment for the patients, oversee medication, cure the injury, assess the patients. Events: Medicines prescription, Doctor allocation, Bed allotment, keeping record of patients. State variables: number of patients per day, quantity of managed medicines, number of unfilled beds, number of registered cases for a particular disease.**