1. In DIU library students can borrow books. Books have different properties like ID, Name, category, availability. Before issuing a book, books availability is checked. Available books are issued to the students, for unavailable book no books are available is showed. Each student has ID and Name.
2. Now write down proper classes for the above scenario.
3. Design a program where student can borrow a book.
4. Write a print method where student ID, name and borrowed book will be shown.
5. In Agora sell-person sells products to customers. Each sell-person has ID, name. Customer ID and name are also stored. When a sell-person sells a product product’s stock is checked. If the amount of the product which the customer wants to buy, is greater than the product stock then the sell-person can calculate the bill. At the end of the day, manager updates the stock of each product. ID, name of manager and customer is also stored for each product.
6. Now design proper class.
7. Write a method so that the sell-man can sell product to customer.
8. Write a method so that the manager can update the stock.
9. Write a method so that the sell-person can print the receipt. Sell-person ID, product ID and customer name will be printed in the receipt.
10. In DIU each student has ID, name, semester. Each student can take three courses per semester. Each course has ID, name, type (theory/lab), marks. Teacher give marks on each course. If teacher gives marks then admin (has ID and name) approves salary of the teacher. Teacher’s ID, name, salary, marks given (yes/no) are saved in the system.
11. Design proper class.
12. Make a way so that the teacher can assign marks to the courses.
13. Make a way so that admin can approve salary.
14. In AB hostel there are 30 rooms. Each room has ID, name, type (big/small), availability, price. This hostel provides many services like goods services and game services. This services are stored in the system id, type (full/half) name (food/game). Manager can check if the room is available or not. If available the manager can assign a room to a student. Student has ID and name. Students has other info like room info, hostel service. Price of food and service is given bellow.

Big room 1000/month

Small room 500/month

Food service 2000 (full)

Food service 1000 (half)

Game service 750 (full)

Game service 400(half)

1. Design class
2. Make a way so that manager can help the students to rent the room and buy services.
3. Make a way so that manager can calculate total monthly bill of Mr Alam, who has rent a small room and has taken half food service.
4. Let, Mr. Alam is a famous cardiologist. His chamber is at AB hospital and has 15 years experience. Mr. Ali is a heart patient and wants to consult a doctor. He went to AB hospital for an appointment of Dr. Alam. He paid 1000 taka as appointment fee. If a doctor consult minimum 15 patients per day then authority gives 50% of patient fee to the doctor. If a doctor consults less than 15 patients per day then authority gives 30% of patient fee to the doctor.
5. Identify objects and their proper properties.
6. Make a way so that Mr. Ali can get an appointment.
7. Make a way so that authority can provide monthly salary to Mr. Alam.