## Homework2-CS5373-Spring2020

Implement Check-out Customer use case using an object-oriented programming language (such as Java, C++ or C#) as specified in the communication diagrams (Fig. 1 and Fig. 2). The classes and their operations are given below and a sample data for entity objects are also given. The logic (pseudocode) for operations provided by Check-out Manager class is specified. When your program requests authorizing a credit card from Bank, you need to enter an authorization number (4-digit number) through a screen provided by Bank Interface object. Also a credit card number will be entered by you via a screen provided by Card Reader Interface object. A receipt and a bill will be printed out on screens in Receipt Printer Interface and Bill Printer Interface objects respectively. State your assumptions if necessary.

**Fig. 1 Communication Diagram for Check-out Customer use case – Approved Credit Card Case**

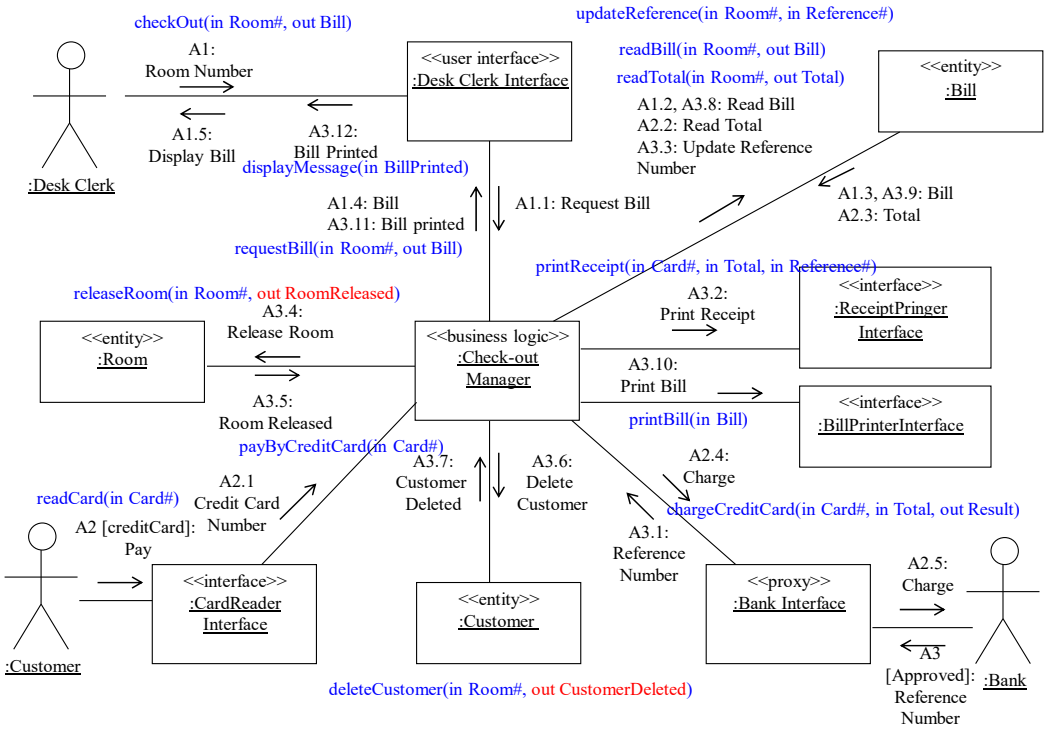
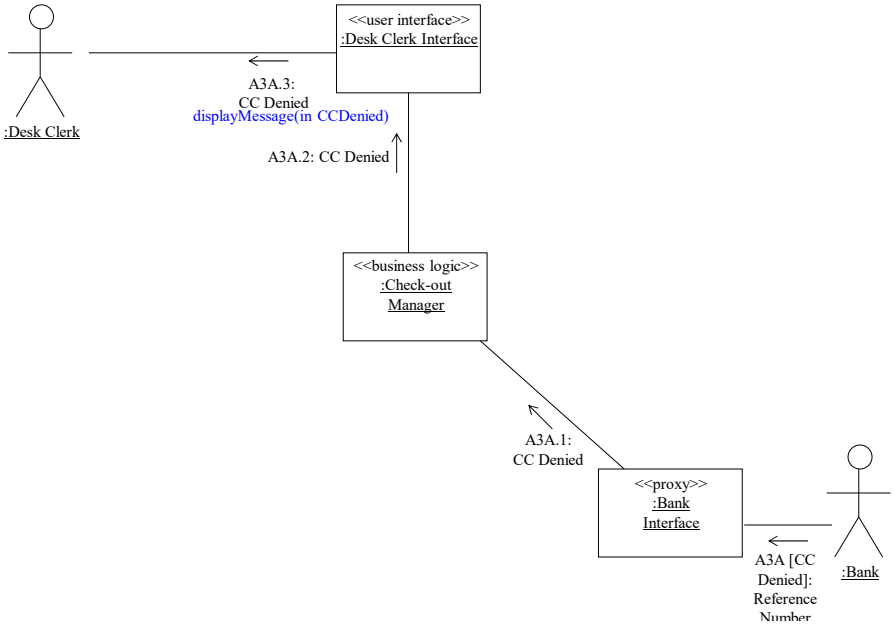
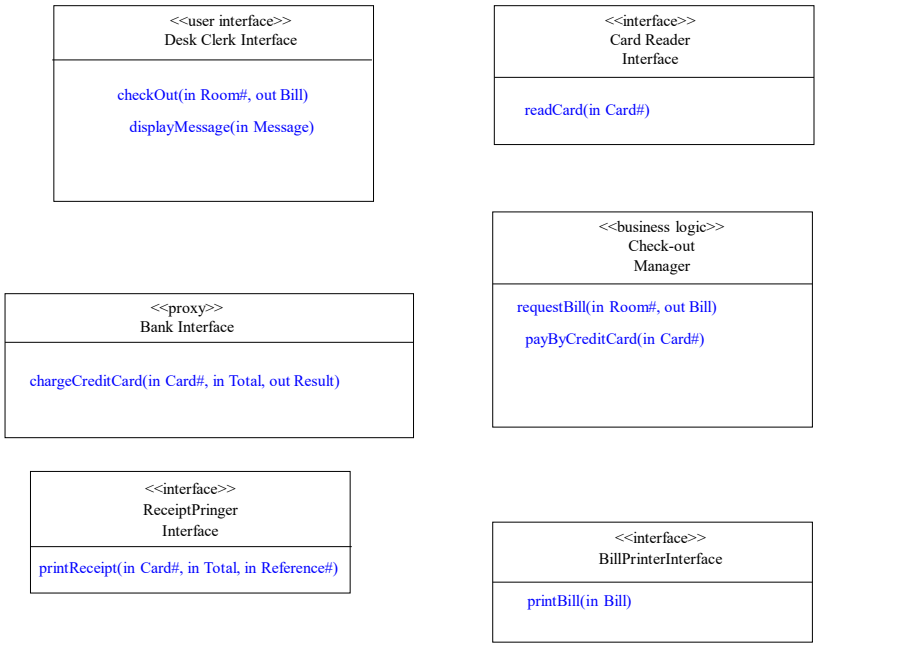
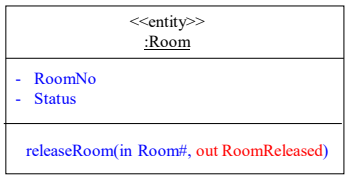


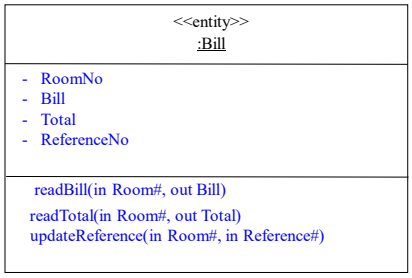
**Fig. 2 Communication Diagram for Check-out Customer use case – Denied Credit Card Case**



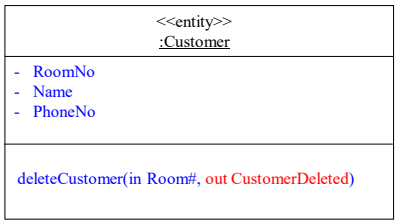






| RoomNo | Status |
|---|---|
| 301 | Occupied |
| 302 | Available |
| 303 | Occupied |




| RoomNo | Bill | Total | ReferenceNo |
|---|---|---|---|
| 301 | John's Bill | 100 | |
| 303 | Sam's Bill | 200 | |




| RoomNo | Name | PhoneNo |
|---|---|---|
| 301 | John | 806-333-1234 |
| 303 | Sam | 806-333-4567 |

**requestBill() and payByCreditCard(in Card#) in Check-out Manager class**

```
requestBill (in Room#, out Bill) {
        Bill.readBill(in Room#, out Bill);
        return Bill;
}

payByCreditCard(in Card#) {
        Bill.readTotal(in Room#, out Total;
        BankInterface.chargeCreditCard(in Card#, in Total, out Result);
        if (Appoved) {
                ReceipPrinterInterface.printReceipt(in Card#, in Total, in Reference#);
                Bill.updateReference(in Room#, in Reference#);
                Room.releaseRoom(in Room#, out RoomReleased);
                Customer.deleteCustomer(in Room#, out CustomerDeleted);
                Bill.readBill(in Room#, out Bill);
                BillPrinterInterface.printBill(in Bill);
                DeskClerkInterface.displayMessage(in BillPrinted);
        }
        else {
                DeskClerkInterface.displayMessage(in CCDenied);
        }
}
```

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