SE 2001: Software Requirements Engineering (A)

Quiz 5

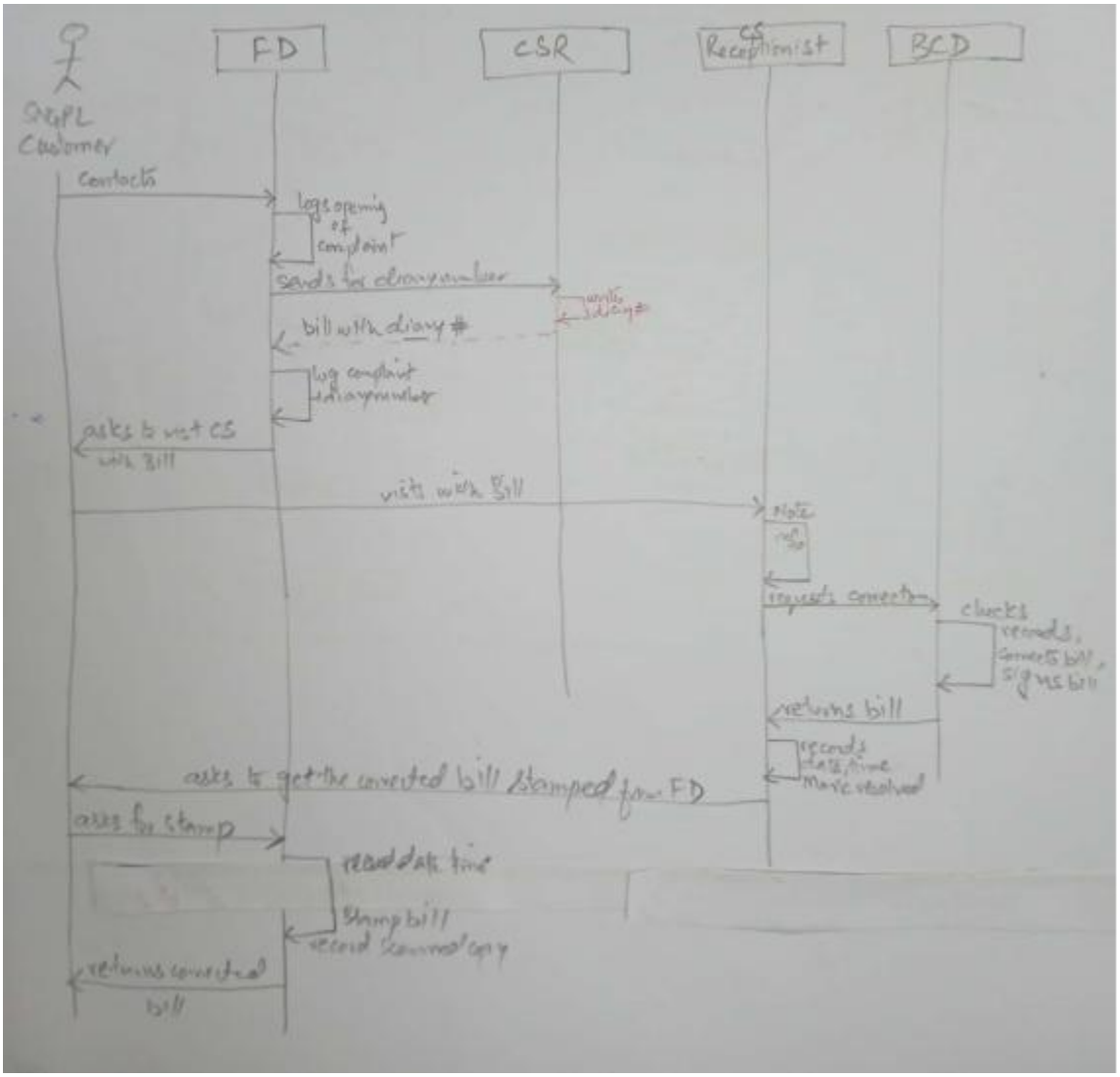
Time: 25 minutes Max Marks: 20 Roll No. _____

Q1. **10 Marks**

SNGPL wants its bill correction process automated. Their current process runs as follows:

An SNGPL customers walks in with a bill and contact the Front Desk (FD). The FD also logs the opening and resolution of this complaint and sends the bill to Customer Support Registrar (CSR) who writes a diary number on the bill and returns the bill to the FD. The FD logs opening of a complaint, records the diary number, date & time of the complaint, writes the complaint number on the bill and returns the bill to the customer. The customer is asked to visit the computer section. The customer visits the computer section and their Receptionist receives the bill from the customer, notes the diary number, bill number, complaint number, date & time, and sends the bill to the Bill Correction Desk (BCD). BCD checks the received readings of the bill in records, corrects the reading on the bill, updates the due amount, signs the bill and returns the bill to the Receptionist. The Receptionist, records the date & time of returning the bill, status of the complaint (i.e. resolved) against the previously recorded diary number and complaint number, returns the bill to the customer and tells the customer to get the correction stamped from the FD. The customer visits the FD and asks for the stamp. The FD stamps the bill, records the date & time of complaint resolution, scans and saves a copy of the corrected bill and returns the corrected bill to the customer.

To do: Express these requirements using **sequence diagram**. Include all entities involved in the process.


FD
CSR
CS Receptionist
BCD
SNPL Customer
contacts
logs opening of complaint
sends for diary number
writes diary #
bill with diary #
log complaint diary number
asks to visit CS with Bill
visits with Bill
Note
requests connection
checks records, corrects bill, signs bill
returns bill
records date/time bill received
asks to get the corrected bill stamped for FD
asks for stamp
read date, time
Stamp bill record scanned copy
returns corrected bill

Q2. **10 Marks**

We need to develop a game scenario where there can be multiple buildings, vehicles, hurdles, power-ups placed on a straight road on a map. There are different buildings on the map and the buildings have different colors, height, width, and type (glass, wooden, concrete). There can be different types of vehicles (like rickshaw, car, van, truck etc.) running on the roads having different colors, number of doors, and number of wheels. A hurdle has a width, height and an impact on score (low, medium, high). The power-ups are of different natures (speed boosters, score multipliers, life savers) and values placed on the road. There can be only one main character that needs to run dodging all the vehicles and hurdles. The character needs to pick as many power-ups as possible. The road changes its properties as the game proceeds (smooth, bumpy), width, and age (old, new). The map knows which buildings, hurdles and power-ups are situated on the road. The life and score of the character is affected by the collisions (managed by the game engine and not by the character) with the vehicles, hurdles and power-ups. A character knows its state.

To do: Develop **CRC cards** for this game scenario. Do not develop a card for the game engine.