Indiaflix is a streaming service that offers a wide variety of regional movies and TV shows – on thousands of internet-connected devices. You are given the responsibility to create a user interface for Indiaflix. The requirements are as follows -

1. There are two plans - Basic and Premium. If a person is not registered yet, they can choose any of the plans during signup.
2. The basic account is free. In the basic account, users have access only to a limited number of movies and TV shows. Each content is assigned a tag - basic or premium. Users of the basic account can only watch upto 5 hours of content every week. Basic users can login only in a single screen at a time.
3. For the premium account, users have to pay an annual subscription of Rs. 999/-.
   Premium account holders have access to all content in the platform, and can watch unlimited hours of content every week. Premium users can login in to upto 4 screens at a time.

Q1. Consider the execution of the following scenario - “When a new user selects the register option, chooses the basic plan and enters the username and password, the user registers successfully.”
What happens at the end of this scenario? Explain the sequence of steps and changes that occur in all the design diagrams from the beginning to the end on execution of this scenario.

Q2. Consider the execution of the following scenario - “When a premium user logs in to IndiaFlix, and selects a content to watch, the system allows them to watch the content”
What happens at the end of this scenario? Explain the sequence of steps and changes that occur in all the design diagrams from the beginning to the end on execution of this scenario.

Q3. For each requirement, list all possible scenarios based on the design. Examples of scenarios are given in Q1 and Q2.

Q4. Identify defects(if any) in the following design diagrams based on the requirements. For each defect, provide a logical explanation of why you think it is a defect.
Class Diagram

User
- username
- password
- noOfLoginScreen
- noOfMinutesWatched
- plan
- register(username : string, password : string, plan : Plan) (method)
- updateNoOfScreens()
- updateMinutesWatched(minutes : float)
- checkLogin(username : string, password : string) : bool

Plan
- planType
- plan

Video
- name
- length
- language
- fileLocation
- plan
- playVideo()

UI Controller
- user

Register Sequence Diagram

Display register screen to user

Prompts user to enter username, password

User enters username and password

Prompts user to select plan

User selects plan

{ if plan == basic }

register(username : string, password : string, plan : Plan)

{ if plan == premium }

Ask for payment information

User makes payment

register(username : string, password : string, plan : Plan)
**Watch Basic Content Sequence Diagram**

- UI Controller
- User
- Video

Displays login screen to user

User enters username and password

( if username and password match )

User clicks on video

( if video type is basic )

Show video to user

( if video type is premium )

error message: Video is premium

**Watch Premium Content Sequence Diagram**

- UI Controller
- User
- Video

Displays login screen to user

User enters username and password

( if username and password match )

User clicks on video

Start streaming video to user