**Create a Java Application Monthly Mess System**

**Create a Customer class with following attributes**

**Customer id(int) , first name(String), last name (String), email(String), password(String), Address String, RegisterDate(LocalDate), planEndDate(LocalDate), Address(String), Phone No(String),plan Enum, final\_amount double**

**Messplan(Plan : enum) Plans Are as follows:-**

**Monthly (3000), Quarterly (11700), Half Year (17500), Yearly (32000)**

**All CRUD operations MUST happen in constant time performance (by using HASHMAP)**

**You perform serialization (Store)(Hint:-JAVA App->OOS->FOS)**

**De-serialization (Restore)(Hint:-JAVA App<-OIS<-FIS)**

**Imperative/Declarative**

**Write the separate utility classes**

**:For populated map, and for i/o operations**

**Validation and parsing are on:**

**a) Validate Customer check for Duplication**

**b) Validatecustomer login if not exist or invalid mail & invalid password**

**Email must be like regex provided in :**

**"[A-Z0-9a-z.\_%+-][+@[A-Za-z0-9.-]+\\.[A-Za-z]{2,}](mailto:+@[A-Za-z0-9.-]+\\\\.[A-Za-z]{2,})"**

**e.g user1.dac@iacsd.com**

**c) ParseValidatePlan , registration amount must be match with plan**

**d) Parse local Date**

**registration date can be only todays date or after todays date and end date must be depend on plan selected**

**e.g if user reg date is 11/10/2023 and selected plan is of 1 year then end date set automatically as 11/12/2024**

**e) Phone number must be only 10 character and the number could be between 0 to 9.**

**Hint : regex**

**1. Sign up Customer**

**2. If already register then sign in**

**3. Change Password**

**4. Sort Customer as per**

**A) First name**

**B) According to plan**

**C) According to date of registration**

**(Imperative/Declarative way)**

**5. Unsubscribe customer according plan duration (month wise (1, 3, 6, 12))**

**6. Display all Customers**

**7) Modify all customers first name (make first Letter capital of customers first name)**

**8) Display email addresses of the customers who did registration in month of January**

**10) Display count of the Customers who have register for plan: Monthly**

**11) Search the Customer who lived in Akurdi.**

**12) Give the 20% discount to the customers who have selected plan for 1 year.**