

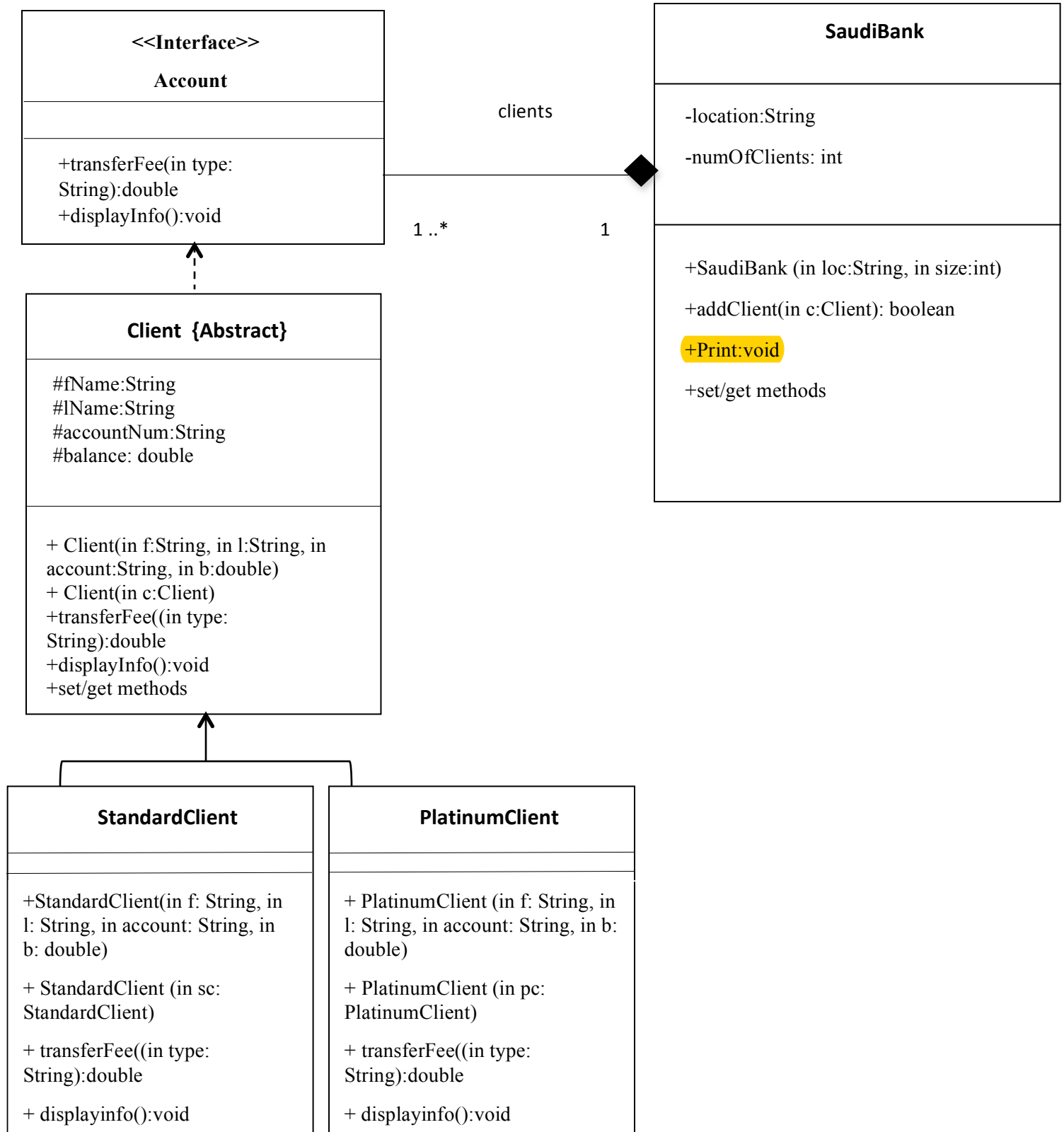
KING SAUD UNIVERSITY
COLLEGE OF COMPUTER AND INFORMATION SCIENCES
Computer Science Department

CSC 113: Introduction to Programming II

Lab_Sheet#6

2nd Semester 1438

Write the code for the following classes plus its main where:



SaudiBank class:

- **location:** The location of the bank.
- **numOfClients:** The number of clients currently having accounts in this bank.
- **SaudiBank (loc: String, size: int):** Constructor to initialize the bank information.
- **addClient(c: Client):** add the client object to the first empty location in the array clients.
- **print():void:** Displays the information of the current object.
- + **set/get methods:** as needed

Client class:

- **firstName:** The client's first name.
- **lastName:** The client's last name.
- **accountNum:** The client's account number.
- **balance:** The client's current balance.
- **Client (f: String, l: String, account: String, b: double):** Constructor to initialize the Client information.
- **Client(c: Client):** Copy constructor.
- **transferFee(type:String): double:** this is an abstract method that returns the transfer fee based on the client account type: standard, or platinum and transfer type.
- **displayinfo(): void :** this is an abstract method that displays the client's information.
- + **set/get methods:** as needed

StandardClient class:

- **StandardClient (f: String, l: String, account: String, b: double):** Constructor to initialize the standard client information.
- **StandardClient (sp: StandardClient):** Copy constructor.
- **transferFee(type: String): double:** returns the transfer fee based on the type of transfer. Standard client transfer rate is as follows:
 - In case of a local transfer: the transfer fee is 7 SR.
 - In case of a global transfer: the transfer fee is 50 SR.
- **displayInfo(): void:** Displays the information of the standard client object including the client's type: that is "Standard Client".

PlatinumClient class:

- **PlatinumClient (f f: String, l: String, account: String, b: double):** Constructor to initialize the platinum client information.
- **PlatinumClient (pc: PlatinumClient):** Copy constructor.
- **transferFee(type: String): double:** returns the transfer fee based on the type of transfer. Platinum client transfer rate is as follows:
 - In case of a local transfer: the transfer fee is 0 SR.
 - In case of a global transfer: the transfer fee is 10 SR.
- **displayInfo(): void:** Displays the information of the standard client object including the client's type: that is "Platinum Client".

1. Create a SaudiBank object named SB that is located in Riyadh and can have a maximum of 50 clients
2. Create a menu to do the following:
 - a) Add a new client to the SB Sudibank: Ask the user if he/she wants to add standard client or platinum client and based on that create the proper object.
 - b) Display the number of the standard clients and the platinum clients: you need to calculate the numbers and then print them.
 - c) Display the total balance of all platinum clients: you need to calculate the total and then print it.
 - d) Display the transfer fee: you need to ask the user to enter:
 - The clients account number that he/she needs to check its transfer fee: to determine the client's type
 - The type of transfer {local or global}.and then retrieve and print the transfer fee based on the given information.
 - e) Display all the information of the SB SaudiBank object.