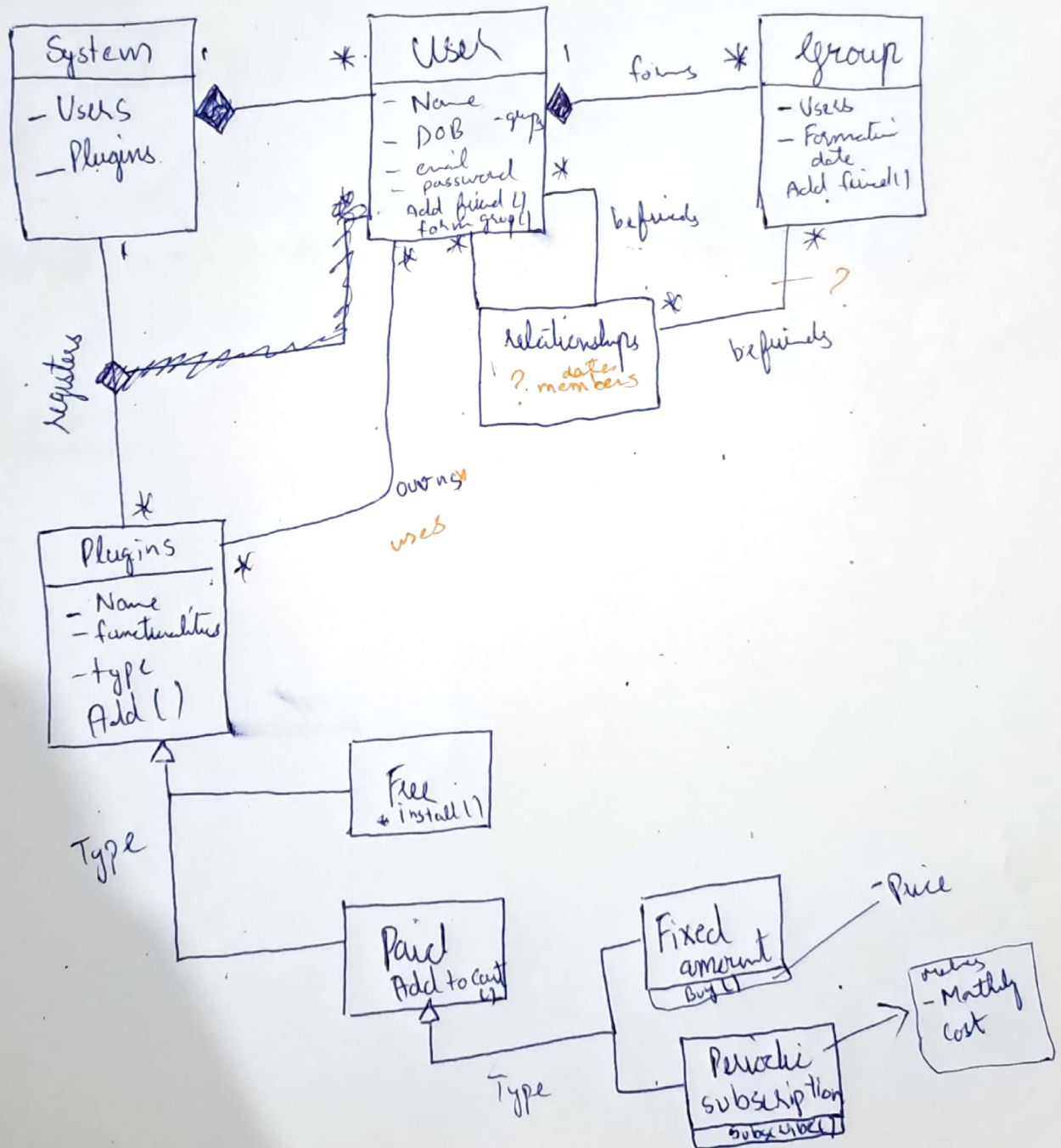


Given the following description of a case study for an social media system, e.g. like facebook.

The system deals with registered users which can be friends. A friendship (between friends/users) can be a normal plain friendship, but also a family relation (father, mother, son, daughter, ...) or a romantic relation (married, ...). Users can also form groups which then play the same role as normal users, like any user a group can also (for example) befriend another user. The system allows third party plugins to be incorporated as well, for example to display pictures or maintain a calendar. A plugin provides extra functionality which varies per plugin, but a plugin must register itself with the system. Users can then choose to use a particular plugin. Plugins can be free, or a user has to pay for them, either with a fixed amount of money or via a periodic subscription.



10
Good!

Software Design and Analysis
Section D
Quiz 2
Total marks=10

Date: 13th Oct, 2023

Time: 25mins

Consider the world of libraries. A library has books, videos, and CDs that it loans to its users like faculty and student. All library material has a id# and a title. In addition, books have one or more authors, videos have one producer and one or more actors, while CDs have one or more entertainers. Either he's an author, producer, entertainer or actor; the only information that you need to store is his name, no extra information is required.

The library maintains one or more copies of each library item (book, video or CD). Copies of all library material can be loaned to users. Reference-only material is loaned for 2hrs and can't be removed from the library. Other material can be loaned for 2 weeks. For every loan, the library records the user, the loan date and time, and the return date and time. For users, the library maintains their name, address and phone number.

a. Draw a design class diagram for the description above.

