Suppose we are planning an offline poke game system with a name of CDDGame. A player and 3 robot playmates play the game with 52 cards (without 2 jokers) on a board. A player could select 3 robot playmates and start to play the game. Also, a player could exit the game or register himself by giving a nick name, select a nick name, set the background music to initiate the game.

When a player and the 3 selected robots play the game, each of them is distributed with 13 cards at random. When the player takes the turn to show cards, the player selects a group of cards and show it. The group of cards should be validated by the type of card, which is established by the rules of CDD game. When one of the players has showed all of the cards on hand, the game is over and the system will calculate the score of each player according to the game rules. Players can decide to leave or continue the game. If a player leaves the game before the end of the game, he or she would be given penalty. All of the registered players are ranked with the scores they have won.

Please answer the following questions with the approach of OOA and OOD.

1. Draw a UML use case diagram for the system (score 7).
2. Draw a UML sequence diagram to assign the responsibilities to objects for the activity of starting game (score 8)
3. Give a state diagram for the player (score 5).
4. Give a VOPC diagram to realize the activity of starting game. (score 10).