

CSE 112 1. Midterm

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I. QUESTION (25 POINTS)

Draw the UML diagram of a class named GameCard to represent football cards played by children. Each football card has a football player on it. Name and surname of the player and the team of the player are shown on the card. There are also the offensive, defensive and midfield capabilities of a player, which are integers between 0 and 100. A card can be compared with another card according to the sum of offensive, defensive and midfield capabilities. Draw also the UML diagram of a class named Child to represent children who play cards. Each child has a name and surname and a set of GameCards. The children can exchange cards, that is one child can give his/her last card to another child who also gives his/her last card to the former. Show also getter and setter methods for all fields in both classes.

II. QUESTION (25 POINTS)

Implement the GameCard and Child classes according to your UML diagram.

III. QUESTION (20 POINTS)

Declare a test class TestGame to do the following. First declare five GameCards with the following football players:

Name	Surname	Team	Offen.	Defen.	Mid.
Marco	Reus	Germany	81	59	81
John	Terry	Chelsea	85	65	84
Hamit	Altntop	Turkey	77	70	77
Fernando	Torres	Chelsea	85	58	84
Hiroshi	Kiyotake	Japan	74	69	77

The first three belong to the child Oguz Yildiz, the last two belong to the child Aysu Yildiz. When they encounter, first they played their first cards and compared them. Then they exchanged their last cards.

IV. QUESTION (30 POINTS)

Implement classes in the following UML diagram.

