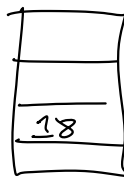


# Object-Oriented Design

6 2 5 4  
3



Quartet is a game in which the player rolls four dice in a series of rounds in order to produce patterns that earn points. The game proceeds in four rounds. In each round, the player rolls all of the dice and then is permitted four "rerolls". In a reroll, the player selects one die to reroll. The player is not required to use all of the rerolls.

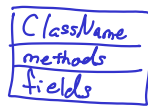
After rolling is finished for a round, the player selects a box on the score card to use. Each box has a set of requirements that must be met in order to score. If the four dice meet those requirements, the box is worth a number of points equal to the sum of the values of the four dice. Otherwise, the box is worth no points. A box can be chosen at most once.

The first box requires all four dice to show the same number. The second box requires three of the dice to show the same number. The third box requires three of the dice to have values in ascending order. The fourth box has no requirements.

Nouns: dice  
die  
box  
score card  
points  
player  
Quartet

Verbs: rolls  
sum\*  
requires  
reroll  
selected  
permitted  
meet  
produce  
earn

## UML Class Diagram\*



→ "has-a"  
⇨ "is-a"

