The class Athlete creates a new athlete with a first name, last name, and grade level. This class will override the compareTo() method from Comparable so that the method can be called from a support method called sortAthletes() that will put all athletes in alphabetical order by their last name. Athlete objects are undecided on their sport.

Two derived classes from Athlete are BasketballPlayer and BaseballPlayer.

A BasketballPlayer object will get a height (in inches) and position (guard, forward, center). BasketballPlayer objects also have a free throw percentage calculated that will take in their number of makes and number of attempts and store and return the percentage. BasketballPlayers are sorted based on their free throw percentage (highest percentage coming first) by overriding the compareTo() method.

A BaseballPlayer object will get a throwsWith property (right, left) and a batsWith property (right, left, switchHitter). A BaseballPlayer object will also have a numErrors property and a batting average calculated that takes in number of bats and number of hits. BaseballPlayers are sorted by their batting average (highest percentage coming first) by overriding the compareTo() method.

Create a driver class that will read in 10 Athletes that are either undecided, basketball players, or baseball players and store their basic info into an array or arrayList. Once the 10 athletes are stored, if they are a basketball player or baseball player read in the correct properties needed to complete that type of Athlete. Once all Athletes have been correctly initialized with all required properties, output the 10 athletes in 3 different ordered lists in an organized format - All Athletes, All Basketball Players, All Baseball Players.

At the end, have an option to add an additional Athlete or quit the application.

```
public class Athlete implements Comparable
{
  String firstName, lastName;
  int studGrade;

  public Athlete(String firstN, String lastN, int grade)
  {
     firstName = firstN;
     lastName = lastN;
     studGrade = grade;
  }

  //Override compareTo()
      //Student that is largest comes first in alphabet
```

```
    //method to get full student name

    //method to get student grade

    //method to sort an array or arrayList of Athletes
}
```