Interface and Exception Handling

1. Create an interface *MusicalInstruments* which contains methods void play(), String getDescription(),float getPrice(). Create interfaces *StringInstr* and *Percurssion* that inherits from *MusicalInstruments*. *StringInstr* contains method, int getNoOfStrings(). *Percurssion* contains method, String getType(). Create class *Violin* that inherits from *StringInstr*. Create class *Tabla* that inherits from *Percurssion*. Give appropriate members for classes. Create student class that contains members, name, musical instrument he owns. Test your classes in main where a set of student objects are created. Print the details of musical instruments he owns.
2. Write a program that does the following – trapping NumberFormatException, ArrayIndexOutOfBoundsException, IOException. Initialize the array and read an array index from the user. If the user has not entered a number, NumberFormatException should handle it. If the user’s input is beyond the size of the array, it should also be handled. Display the number at the index value given by the user. Display error messages accordingly.

Write a program to handle NullPointerException and use the ‘finally’ to display a message to the user.