class name: Date
method signature: public boolean isValid() {} //check if a given date is valid calendar date

Test Case #	Requirement	Test description and Input Data	Expected result/output
1	Method will return false for any date with a year before 1900.	• Create an instance of Date with valid day and month but with a year < 1900. • test input: "1/13/600"	false
2	Method will return false for any date with a month < 1, such as a negative month.	• Create an instance of Date with valid day and year but with a month < 1. • test input: "-50/20/1960"	false
3	Method will return false for any date with a year > the current year. This will still be the case, even if the month and day are valid, and the year is a leap year.	• Create an instance of Date with the month = 2, day = 29, and the year is a leap year but the year > the current year. • test input: "2/29/2024"	false
4	Method will return false for any date with a month, day, and year where the student is younger than 16 years old.	• Create an instance of Date with month < current month, day < current day, and year > current year - 16 (min age) • test input: "1/20/2011"	false

5	Method will return false for any date with a month, day and year where the student is younger than 16 years old.	• Create an instance of Date with month > current month, day > current day, and year = current year - 16 (min age) • test input: “3/11/2007”	false
6	Number of days in February for a leap year shall be 29. Method returns true if the date given has the correct number of days >= 1 and <= 29 and the year is a leap year.	• Create an instance of Date with month = 2, day = 29, and the year is a leap year. • test input: “2/29/2004”	true
7	Method returns true if month, date, and year are valid. i.e Month is April, with days >=1 and <=30.	• Create an instance of Date with a valid month, date and year. • test input: “4/11/1996”	true

class name:
Student
method signature:
public int compareTo() {} //Override method to compare the profiles of two different students

Test Case #	Requirement	Test description and Input Data	Expected result/output
1	Method will compare the current student with other students based on their profiles. If the current student profile is greater than the other student profile, it will return 1	• Student student1 = new Student(new Profile ("Serna", "Maria", "10/12/1992), Major.BAIT, 30)); • Student student2 = new Student(new Profile ("Lopez", "Juan", "10/12/1992), Major.BAIT, 30));	1
2	Method will compare the current student with other students based on their profiles. If the current student profile is less than the other student profile, it will return -1	• Student student2 = new Student(new Profile ("Lopez", "Juan", "10/12/1992), Major.BAIT, 30)); • Student student3 = new Student(new Profile ("Tylor", "Juan", "12/13/1993"), Major.BAIT, 30));	-1
3	Method will compare the current student with other students based on their profiles. If the current student profile is equal than the other student profile, it will return 0	• Student student3 = new Student(new Profile ("Tylor", "Juan", "12/13/1993"), Major.BAIT, 30)); • Student student4 = new Student(new Profile ("Tylor", "Juan", "12/13/1993"), null, 0));	0

4	If two profiles have the same lastname, the compareTo will compare the first name.	• Student student4 = new Student(new Profile (“Tylor”, “Juan”, “12/13/1993”), null, 0)); • Student student5 = new Student(new Profile (“Tylor”, “Vanessa”, “12/13/1986”), null, 0));	1
5	If two profiles have the same lastname and firstname, we will compare by the date of birth. If the date of birth of the current object is greater than the other student date of birth, it will return 1	• Student student5 = new Student(new Profile (“Tylor”, “Vanessa”, “12/13/1986”), Major.BAIT, 30)); • Student student6 = new Student(new Profile (“Tylor”, “Vanessa”, “12/13/1989”), null, 0));	1
6	If two profiles have the same lastname and firstname, we will compare by the date of birth. If the date of birth of the current object is less than the other student date of birth, it will return 1	student5.compareTo(student6);	-1