Class Name: Date

Method Signature: public int isValid(){} // check if a given date is a valid calendar date.

| **Test Case #** | **Requirement** | **Test Description & Input Data** | **Expected Result/Output** |
| --- | --- | --- | --- |
| 1 | The method shall return the integer 1 for any date that is an invalid calendar date/month/year. | Create an instance of Date with a valid day, invalid month, and valid year.   * Test date: “13/1/2023” | Fail/False |
| 2 | The method shall return the integer 1, indicating it is an invalid calendar date/month/year. | Create an instance of a Date where we put an invalid 31st day on a 30-day month.   * Test date:   “11/31/2023” | Fail/False |
| 3 | The method shall return 0, indicating it is a valid calendar date/month/year. Testing day - 31 on a 31-day month. | Create an instance of a Date where we put a valid 31st day on a 30-day month.   * Test Date:   “12/31/2023” | Pass/True |
| 4 | The method shall return 2, indicating it is an invalid calendar date.  Checking if the date has passed. | Create an instance of a Date and check to see if the date has passed.   * Test Date:   “4/30/2023” | Fail/False |
| 5 | The method shall return a 0, indicating it is a valid date. Checking a date to if it has been passed already. | Create an instance of a Date. Check if it is a future date.   * Test Date:   “2/1/2024” | Pass/True |
| 6 | The method shall return a true. Checking for a leap year. | Create an instance of a Date and see if the date is a valid leap year date.   * Test Date:   “2/29/2024”‘ | Pass/True |
| 7 | The method shall return 3, indicating it is an invalid calendar date.  Checking a date in the future that is past 6 months. | Create an instance of a Date. It is within 6 months from the current date.   * Test Date:   “6/30/2024” | Fail/False |
| 8 | The method shall return 0, indicating it is a valid calendar date. Checking for just a normal date. | Create an instance of a Date. Normal valid calendar date.   * Test Date:   “03/28/2024” | Pass/true |
| 9 | The method shall return a 1. Past date. | Create an instance of a Date. Date with a past year.   * Test Date:   “01/01/1999“ | Fail/false |

Class Name: Event

Method Signature: public int equals(Object obj){} // Compares 2 Event objects based on if they have the same dates, timeslots, and location.

| **Test Case #** | **Requirement** | **Test Description & Input Data** | **Expected Result/Output** |
| --- | --- | --- | --- |
| 1 | The method shall return true if both events are equal to each other—the Date, Location, and Time. | Create an instance of Date, Timeslot. contact, duration. Identical event and run .equals() method to compare both events.   * Event date1: “11/13/2023” * Event date2:   “11/13/2023”   * Timeslot.morining, CS CS.rutgers@edu, duration - 60 mins. | Pass/True |
| 2 | The method shall return true for different durations. The test case still passes for different time durations. | Create an instance of Date,timeslot,contact, duration. Where all of them are equal except for the durations. But this still should be equal because .equals checks if date,location, and time are equivalent.   * Event date1: “11/13/2023” * Event date2:   “11/13/2023”   * Timeslot.morining, Location -AB2225, CS CS.rutgers@edu, duration event 1 - 60 mins. Event 2 - 90 mins | Pass/true |
| 3 | The method shall return true for different contacts. | Create an instance of a Date, timeslot, contact, and duration. But in this case, the contact is different.   * Event date1: “11/13/2023” * Event date2:   “11/13/2023”   * Timeslot.morining, Location AB2225 for both. * Event 1 - CS CS.rutgers@edu. Event 2- ITI, ITI@rutgers.edu , duration event 1 - 60 mins. Event 2 - 60 mins | Pass/True |
| 4 | The method shall return False for different locations. | Create an instance of a Date, timeslot, contact, and duration. But in this case, the location is different.   * Event date1: “11/13/2023” * Event date2:   “11/13/2023”   * Timeslot.morining, * Event 1 - HLL144 * Event 2 - AB2225 * Event 1 - CS CS.rutgers@edu. Event 2- CS, CS@rutgers.edu , duration event 1 - 60 mins. Event 2 - 60 mins | Fail/false |
| 5 | The method shall return false, as we are testing to see if different time slots results in a fail test case. | Create an instance of a Date, timeslot, contact, and duration. But in this case, the location is different.   * Event date1: “11/13/2023” * Event date2:   “11/13/2023”   * Event 1 Timeslot.morining, * Event 2-Timeslot.evening * Event 1 - AB2225 * Event 2 - AB2225 * Event 1 - CS CS.rutgers@edu. Event 2- CS, CS@rutgers.edu , duration event 1 - 60 mins. Event 2 - 60 mins | Fail/false |
| 6 | The method shall return false as the method checks for different dates. | Create an instance of a Date, timeslot, contact, and duration. But in this case, the date is different. Different day, month,year.   * Event date1: “01/24/2024” * Event date2:   “11/13/2023”   * Event 1 Timeslot.morining, * Event 2-Timeslot.morning * Event 1 - AB2225 * Event 2 - AB2225   Event 1 - CS CS.rutgers@edu. Event 2- CS, CS@rutgers.edu , duration event 1 - 60 mins. Event 2 - 60 mins‘ | Fail/False |