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Project 1 Testbeds

class name: Date.java method signature: <code>public boolean isValid()</code>			
Test Case #	Requirement	Test case description and Input Data	Expected result/output
1	A year before 1900 should be invalid.	<ul style="list-style-type: none">Create an instance of Date with a valid month and day, but a year < 2023Test data: 9/26/1832	False
2	A year after 2100 should be invalid.	<ul style="list-style-type: none">Create an instance of Date with a valid month and day, but a year > 2100Test data: 6/11/2154	False
3	Number of days in February for a non-leap year is 28. The method should return false, if a non-leap year has 29 days in February. If this condition is not met, this method should return false.	<ul style="list-style-type: none">Create an instance of Date with a non-leap year having 29 days in FebruaryTest data: 2/29/2023	False
4	The month must be within the range of 1 to 12. If this condition is not met, the method should return false.	<ul style="list-style-type: none">Create an instance of Date with a month > 12Test data: 13/2/2012	False
5	The day should not be greater than 31 for the following months: Jan, Mar, May, Jul, Aug, Oct, Dec. If this condition is not met, the method should return false.	<ul style="list-style-type: none">Create an instance of Date with day > 31 for any of the mentioned months.Test data: 7/33/2009	False
6	The day should not be greater than 30 for the following months: Apr, Jun, Sep, Nov. If this condition is not met, the method should return false.	<ul style="list-style-type: none">Create an instance of Date with day > 30 for any of the mentioned months.Test data: 6/31/2025	False
7	The day should not be less than 1 for any of the months. If this condition is not met, this method should return false.	<ul style="list-style-type: none">Create an instance of Date with day < 1 for any of the mentioned months.Test data: 9/0/2026	False
8	A negative number of the month, day, or year is invalid.	<ul style="list-style-type: none">Create an instance of Date with day < 0 for any of the mentioned months.Test data: 10/-5/2002	False
9	For a leap year, February is	<ul style="list-style-type: none">Create an instance of Date with month	True

	permitted to have 29 days.	as February and day as 29th for a leap year. <ul style="list-style-type: none"> Test data: 2/29/2024 	
10	A legitimate calendar date must be recognized as valid.	<ul style="list-style-type: none"> Create an instance of Date with a viable date. Test data: 9/26/2023 	True

Date.java testbed main() results:

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**Test case #1. A year before 1900 should be invalid.
Passed!
**Test case #2. A year after 2100 should be invalid.
Passed!
**Test case #3. Number of days in February for a non-leap year is 28.
Passed!
**Test case #4. The month must be within the range of 1 to 12.
Passed!
**Test case #5. The day should not be greater than 31 for the following months: Jan, Mar, May, Jul, Aug, Oct, Dec.
Passed!
**Test case #6. The day should not be greater than 30 for the following months: Apr, Jun, Sep, Nov.
Passed!
**Test case #7. The day should not be less than 1 for any of the months.
Passed!
**Test case #8. A negative number of the month, day, or year is invalid.
Passed!
**Test case #9. For a leap year, February is permitted to have 29 days.
Passed!
**Test case #10. A legitimate calendar date must be recognized as valid.
Passed!

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class name: Event.java method signature: <code>public boolean equals(Event checkEvent){</code>			
Test Case #	Requirement	Test case description and Input Data	Expected result/output
1	Two different dates should not be equal.	<ul style="list-style-type: none"> Create two instances of Event with different dates. Test data: <ul style="list-style-type: none"> 8/15/2023, <i>MORNING</i>, <i>AB2225</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 9/29/2023, <i>MORNING</i>, <i>AB2225</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 	False
2	Two different time slots should not be equal.	<ul style="list-style-type: none"> Create two instances of Event with different time slots. Test data: <ul style="list-style-type: none"> 6/2/2022, <i>MORNING</i>, <i>HLL114</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 6/2/2022, <i>AFTERNOON</i>, <i>HLL114</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 	False

3	Two different locations should not be equal.	<ul style="list-style-type: none"> Create two instances of Event with different locations. Test data: <ul style="list-style-type: none"> 9/3/2025, <i>MORNING</i>, <i>AB2225</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 9/3/2025, <i>MORNING</i>, <i>HLL114</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 	False
4	Two different contacts should not impact equals().	<ul style="list-style-type: none"> Create two instances of Event with different contacts. Test data: <ul style="list-style-type: none"> 11/5/2015, <i>MORNING</i>, <i>HLL114</i>, <i>EE</i>, <i>ee@rutgers.edu</i>, 30 11/5/2015, <i>MORNING</i>, <i>HLL114</i>, <i>CS</i>, <i>cs@rutgers.edu</i>, 30 	True
5	Two different durations should not impact equals().	<ul style="list-style-type: none"> Create two instances of Event with different durations. Test data: <ul style="list-style-type: none"> 11/26/2020, <i>AFTERNOON</i>, <i>ARC103</i>, <i>EE</i>, <i>ee@rutgers.edu</i>, 30 11/26/2020, <i>AFTERNOON</i>, <i>ARC103</i>, <i>EE</i>, <i>ee@rutgers.edu</i>, 45 	True
6	Two events with the same date, time slot, and location should be equal.	<ul style="list-style-type: none"> Create two instances of Event with identical Date, Timeslot, and Location. <ul style="list-style-type: none"> 9/8/2021, <i>EVENING</i>, <i>MU302</i>, <i>EE</i>, <i>ee@rutgers.edu</i>, 30 9/8/2021, <i>EVENING</i>, <i>MU302</i>, <i>EE</i>, <i>ee@rutgers.edu</i>, 30 	True

Event.java testbed main() results:

```

**Test Case #1. Two different dates should not be equal.
Passed!
**Test Case #2. Two different dates should not be equal.
Passed!
**Test Case #3. Two different locations should not be equal.
Passed!
**Test Case #4. Two different contacts should not impact equals().
Passed!
**Test Case #5. Two different durations should not impact equals().
Passed!
**Test Case #6. Two events with the same date, time slot, and location should be equal.
Passed!

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