

Class Birthday

java.lang.Object
 Birthday

```
public class Birthday
extends Object
```

Date March 1-2023 This class is the Birthday program where it will calculate the probability of any two people who share the same birthday in the (n) number of students.

Version:

1.0

Author:

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Field Summary

Fields

Modifier and Type	Field	Description
private Scanner	in	A global Scanner object
private ArrayList <BirthdayPerson>	list	A global ArrayList
private Random	rand	A global Random object.

Constructor Summary

Constructors

Constructor	Description
Birthday()	

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type	Method	Description
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```
private double birthdayTrial(int people,
                             int testcases)
```

This method calls other methods to calculate the overall percentage of any two people sharing the same birthday in x amount of runs.

```
private double chanceOfSameBirthday(int num)
```

This method calculates the chance of any two people sharing a birthday in a class.

```
private void makePerson(int count)
```

This method is responsible for creating a BirthdayPerson object and storing an int value birthday

```
private int possibleBirthdays()
```

This method calculates if any two people in the class shares a birthday.

```
void testBirthday()
```

This method is to test the Birthday program which involves asking the user on how many people are in the class and how many times to run.

Methods inherited from class java.lang.Object

```
clone , equals , finalize , getClass , hashCode , notify , notifyAll , toString ,
wait , wait , wait
```

Field Details

rand

```
private Random rand
```

A global Random object.

in

```
private Scanner in
```

A global Scanner object

list

```
private ArrayList <BirthdayPerson> list
```

A global ArrayList

Constructor Details

Birthday

```
public Birthday()
```

Method Details

makePerson

```
private void makePerson(int count)
```

This method is responsible for creating a BirthdayPerson object and storing an int value birthday

Parameters:

count - An int value that represents the number of people to make.

possibleBirthdays

```
private int possibleBirthdays()
```

This method calculates if any two people in the class shares a birthday.

Returns:

Returns a one when a match is found

chanceOfSameBirthday

```
private double chanceOfSameBirthday(int num)
```

This method calculates the chance of any two people sharing a birthday in a class.

Parameters:

num - An int value that is the number of people in the class

Returns:

Returns a double value that represents a percentage.

birthdayTrial

```
private double birthdayTrial(int people,  
                             int testcases)
```

This method calls other methods to calculate the overall percentage of any two people sharing the same birthday in x amount of runs.

Parameters:

people - An int value of how many people are in the class.

testcases - An int value of how many times to run the trial.

Returns:

Returns a double value that represents a percentage.

testBirthday

```
public void testBirthday()
```

This method is to test the Birthday program which involves asking the user on how many people are in the class and how many times to run.