Implement Class BankAccount with these specifications

It holds the following data:

- **account ID**
- **balance**

The following methods apply to this class:

- Constructor There are 2 constructors. The first sets the balance to a given value. The second is a no-argument constructor and it sets the balance to 0.
- Setters and getters These methods allow accessing the private data fields.
- **withdraw** withdraws an amount of money from the account if the balance is sufficient.
- **deposit** deposits an amount of money in the account

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1) The Java class called `Holiday` is started below. An object of class `Holiday` represents a holiday during the year. This class has three instance variables:

- `name`, which is a `String` representing the name of the holiday
- `day`, which is an `int` representing the day of the month of the holiday
- `month`, which is a `String` representing the month the holiday is in

```
public class Holiday {
private String name;
private int day;
private String month;
// your code goes here
}
```

a) Write a constructor for the class `Holiday`, which takes a `String` representing the name, an `int` representing the day, and a `String` representing the month as its arguments, and sets the class variables to these values.

b) Write a method `inSameMonth`, which compares two instances of the class `Holiday`, and returns the Boolean value `true` if they have the same `month`, and `false` if they do not.

c) Write a method `avgDate` which takes an array of base type `Holiday` as its argument, and returns a `double` that is the average of the `day` variables in the `Holiday` instances in the array. You may assume that the array is full (i.e. does not have any `null` entries).

d) Write a piece of code that creates a `Holiday` instance with the name “Independence Day”,

with the day “4”, and with the month “July”.

2) The class Movie is started below. An instance of class Movie represents a film. This class
has the following three class variables:

- `title`, which is a `String` representing the title of the movie
- `studio`, which is a `String` representing the studio that made the movie
- `rating`, which is a `String` representing the rating of the movie (i.e. PG13, R, etc)

```
public class Movie {
private String title;
private String studio;
private String rating;
// your code goes here
}
```

a) Write a constructor for the class `Movie`, which takes a `String` representing the title of the movie, a `String` representing the studio, and a `String` representing the rating as its
arguments, and sets the respective class variables to these values.

b) Write a second constructor for the class Movie, which takes a `String` representing the title
of the movie and a `String` representing the studio as its arguments, and sets the respective class variables to these values, while the class variable `rating` is set to "PG".

c) Write a method `getPG`, which takes an array of base type `Movie` as its argument, and
returns a new array of only those movies in the input array with a rating of "PG". You may
assume the input array is full of `Movie` instances. The returned array need not be full.

d) Write a piece of code that creates an instance of the class `Movie` with the title “Casino
Royale”, the studio “Eon Productions”, and the rating “PG13”.