

Random Class

What is the Random Class

- A Class that has some methods to generate a random number of different types
 - Note: random numbers generated are not completely random (code implementation means the numbers cannot be truly random)
- The class is in the `java.util` package
- Oracle documentation:
<https://docs.oracle.com/javase/8/docs/api/java/util/Random.html>

Using the Random class

- 1) Create an object of the Random class

```
Random obj = new Random();
```

- 2) Use a method to generate a random positive number

Some methods of the Random class:

```
nextInt()  
nextDouble()  
nextBoolean()
```

Highlight:

nextInt() method allows an upper bound to be defined in the parameter. This will allow you to define a range for the numbers to generated in.

For example: nextInt(10) will generate a number from 0-9 because the upper bound is not included in the possible number range

Examples

```
Random obj = new Random();  
System.out.println(obj.nextInt(10));  
System.out.println(obj.nextInt(50));  
System.out.println(obj.nextInt(50) + 1);
```

- Object created
- Generates a number from 0-9
- Generates a number from 0-49
- Generates a number from 0-49, then 1 is added to the number which leads to a range of 1-50

```
Random obj = new Random();  
System.out.println(obj.nextBoolean());
```

- Generates a random boolean value

```
Random obj = new Random();  
System.out.println(obj.nextDouble());
```

- Generates a random double value from 0.0 to 1.0

- Create a method that will return a random uppercase letter
- Create a method that will return a random lowercase letter
- Create a method that will return a random phone number
 - > Format: (xxx) – xxx – xxxx
- Create a method that will generate a random password including at least one uppercase, lowercase, and number characters
- Create a class Person with instance variables: name, age
- Then generate random Person objects, for this you can use an array with some base values and from there grab random names and ages. Store all random Person objects into an ArrayList