Workshop 5 (Week 6) – Fuzz Testing

The purpose of this workshop is to practice and develop an understanding of fuzz testing (random testing).

1. Concepts

1) How does Random Testing work?
2) How does Adaptive Random Testing work?

2. Fuzz Testing Exercise

1) Apply fuzz testing to discover the bug in the following function. You need to develop a random number generator to generate test cases.

```
// return the absolute value of x
int myAbs(int x) {
  if (x > 0)
    return x;
  else if (x<0)
    return -x;
  else
    return x+1;  //a bug here
}
```

2) Apply fuzz testing to test the Java Math.abs methods:

```
public static int abs(int a)
```
https://docs.oracle.com/javase/7/docs/api/java/lang/Math.html#abs(int)

```
public static double abs(double a)
```
https://docs.oracle.com/javase/7/docs/api/java/lang/Math.html#abs(double)

3. Try the Web: Code In Game

https://www.codingame.com/ide/puzzle/temperatures