# Implementation and Testing Unit – Evidence

## **David Ellis**

## **Cohort E18**

## I.T. 1 – Encapsulation Example Screenshot \*W9

Take a screenshot of an example of encapsulation in a program.

## I.T. 2 – Inheritance Example Screenshots \*W9

Take a screenshot of the use of Inheritance in a program. Take screenshots of:

●  A Class

●  A Class that inherits from the previous class

●  An Object in the inherited class

●  A Method that uses the information inherited from another class.

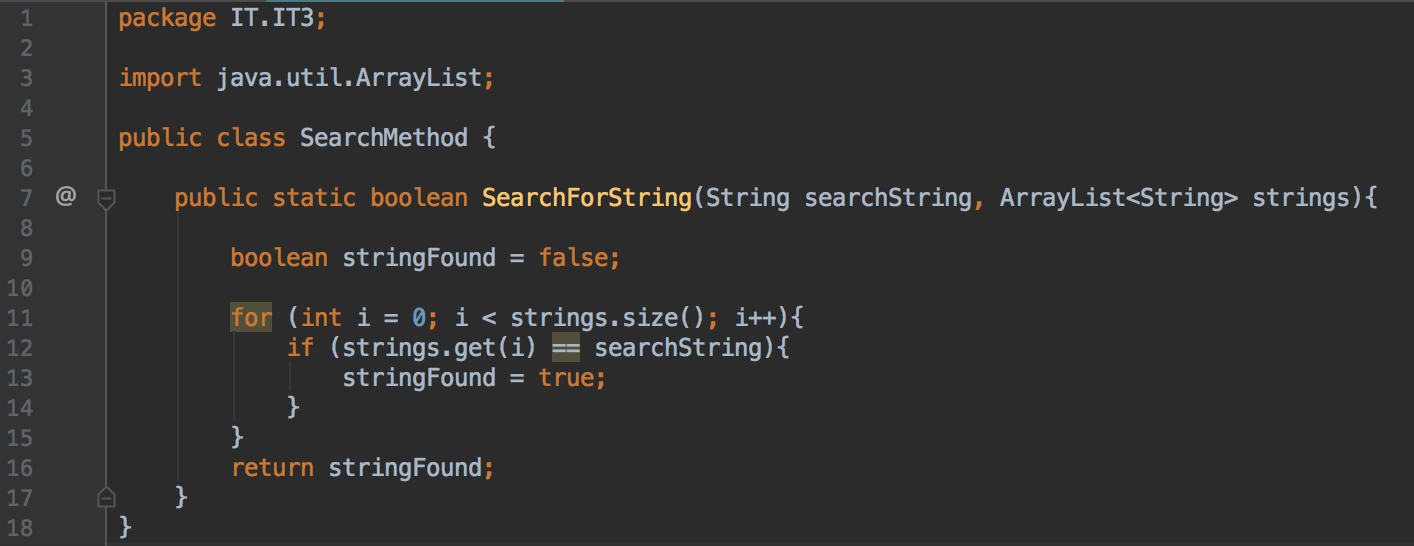
## I.T. 3 – Searching Data Example Screenshots

Demonstrate searching data in a program. Take screenshots of:

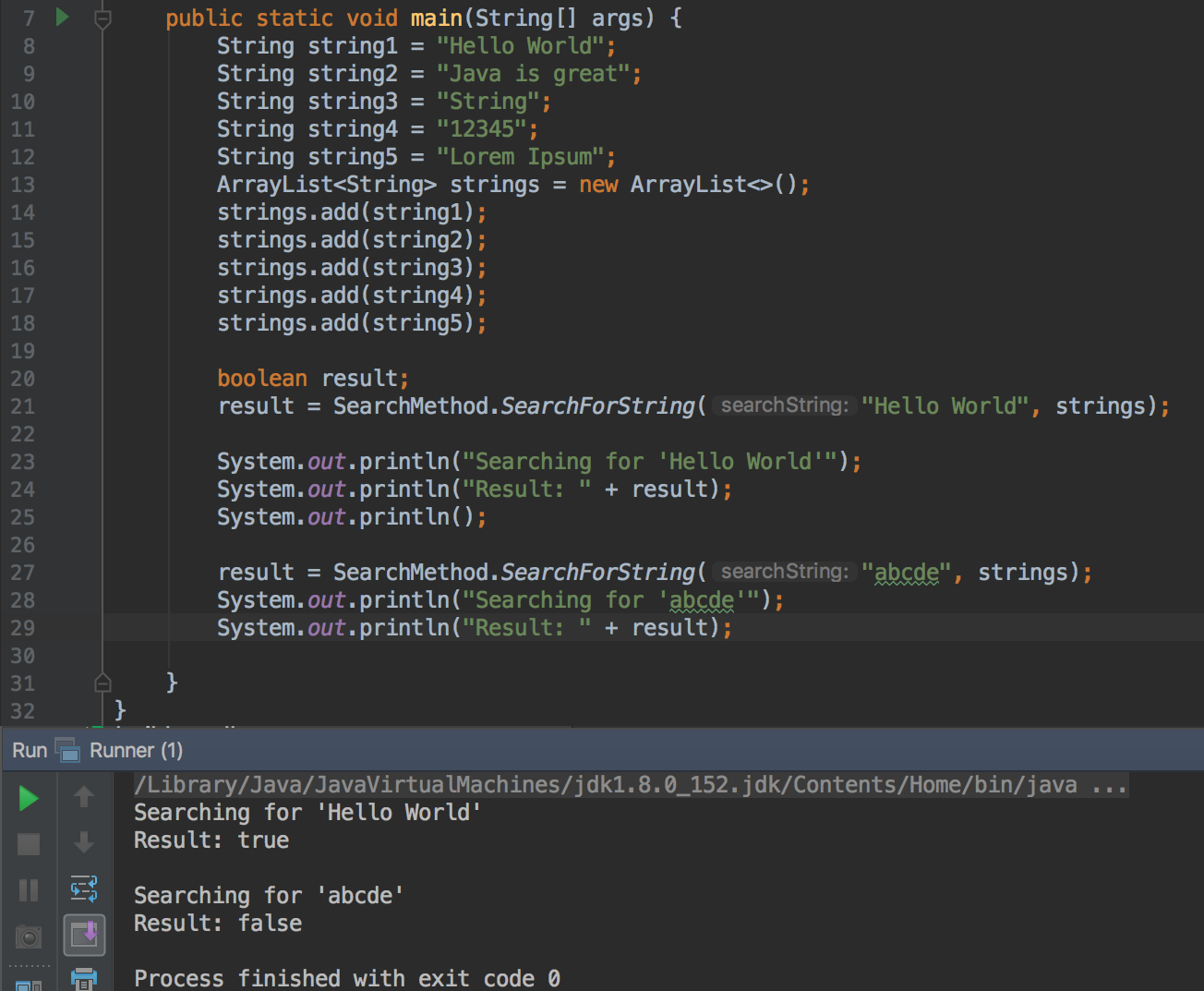
●  Function that searches data

●  The result of the function running

The searchForString method searches for a specific string in an ArrayList of String objects and returns true if it finds the string or false if it does not find the string.



Result of calling SearchForString method:



## I.T. 4 – Sorting Data Example Screenshots

Demonstrate sorting data in a program. Take screenshots of:

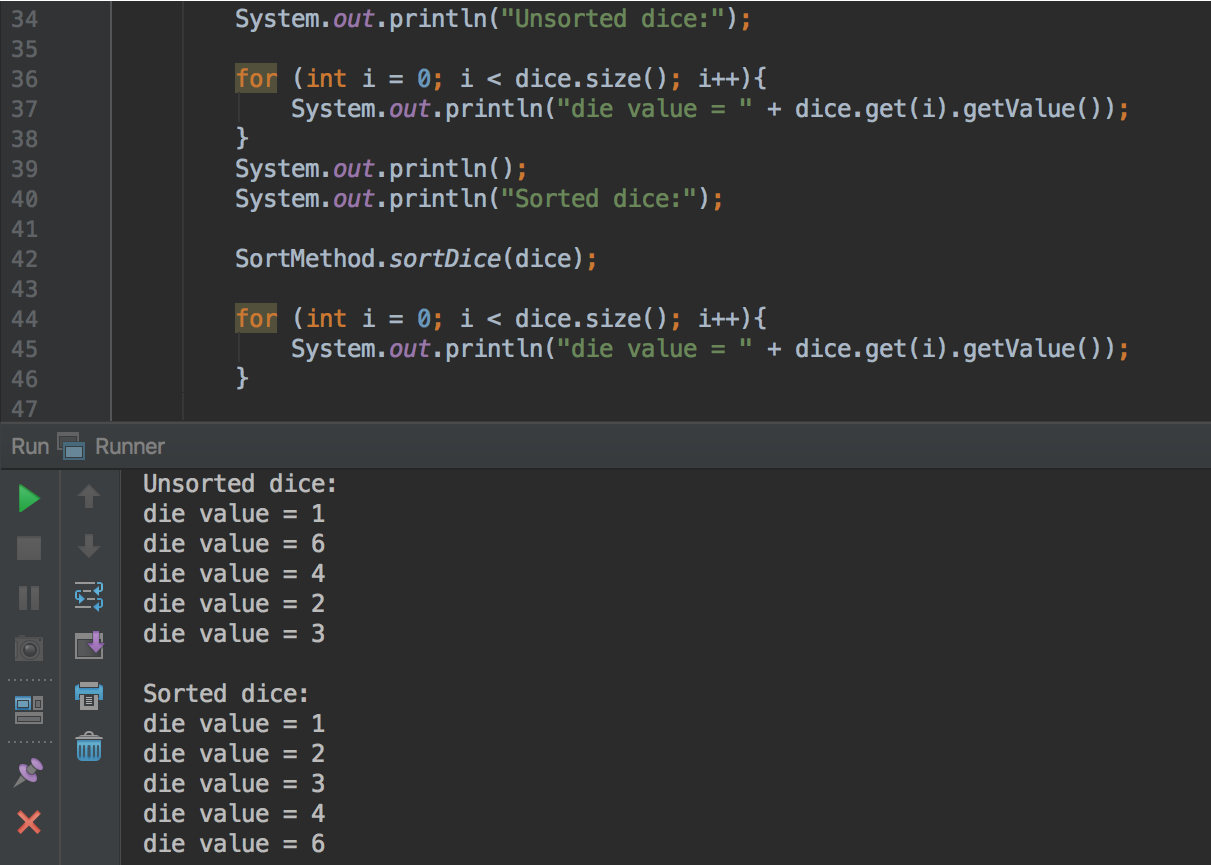
●  Function that sorts data

●  The result of the function running

The sortDice method sorts an ArrayList of Die objects (a Die object has a value parameter) by using a comparator to tell Collections.sort that it needs to sort the collection of dice based on the die value.



Result of calling the sortDice method:



## I.T. 5 – Array Example Screenshots

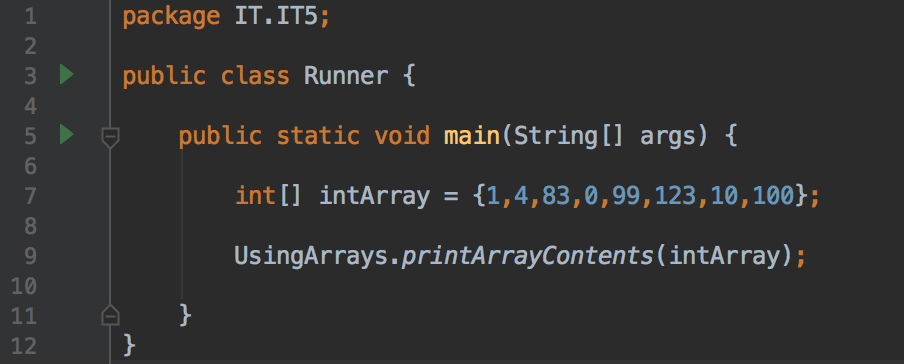
Demonstrate the use of an array in a program. Take screenshots of:

●  An array in a program

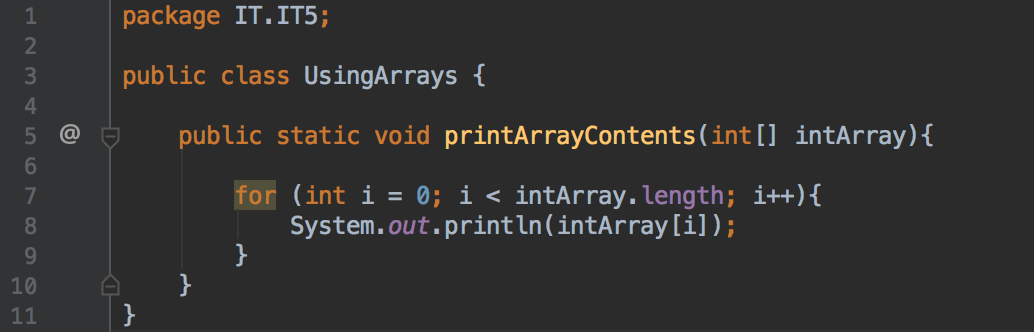
●  A function that uses the array

●  The result of the function running

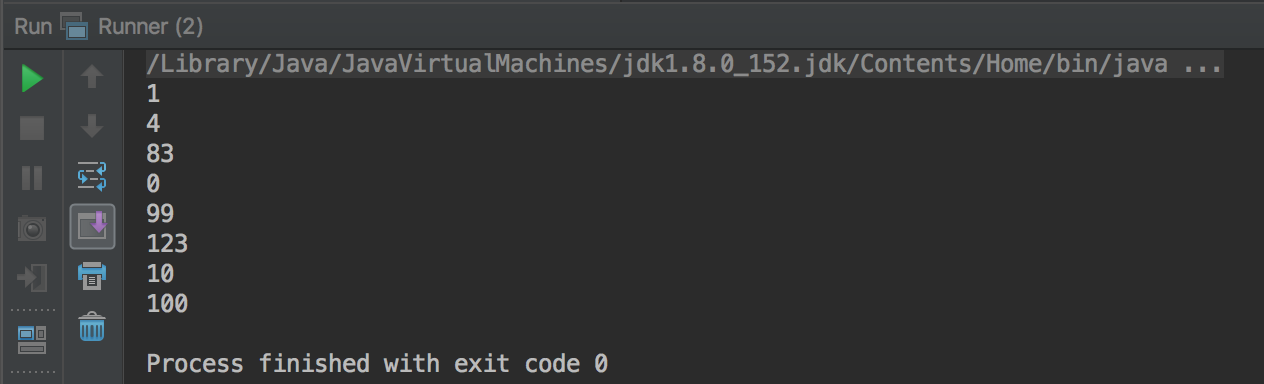
An array of integers containing 8 elements is created in the Runner class below



The printArrayContents method shown below takes in an array of integers and prints out the contents of the array



The output from running the Runner class is shown below, with the contents of the array of integers printed out



## I.T. 6 – Hash Example Screenshots

Demonstrate the use of a hash in a program. Take screenshots of:

●  A hash in a program

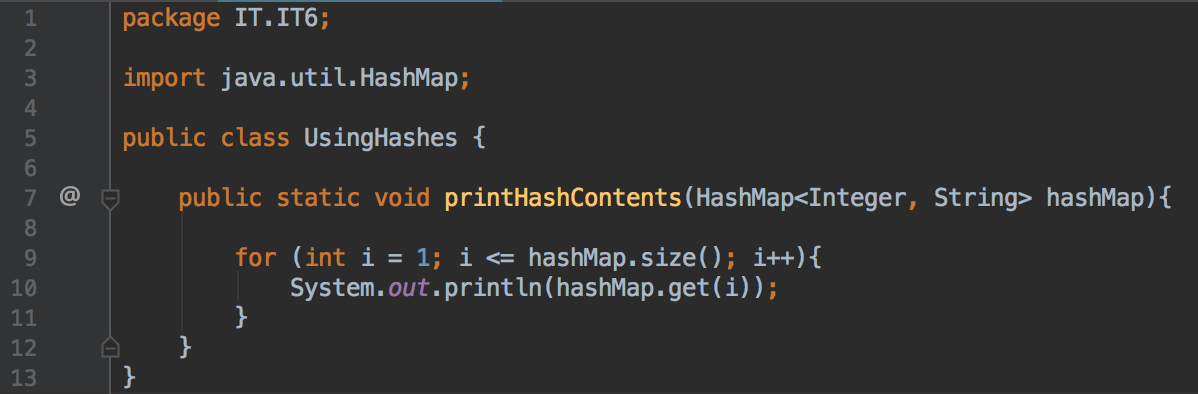
●  A function that uses the hash

●  The result of the function running

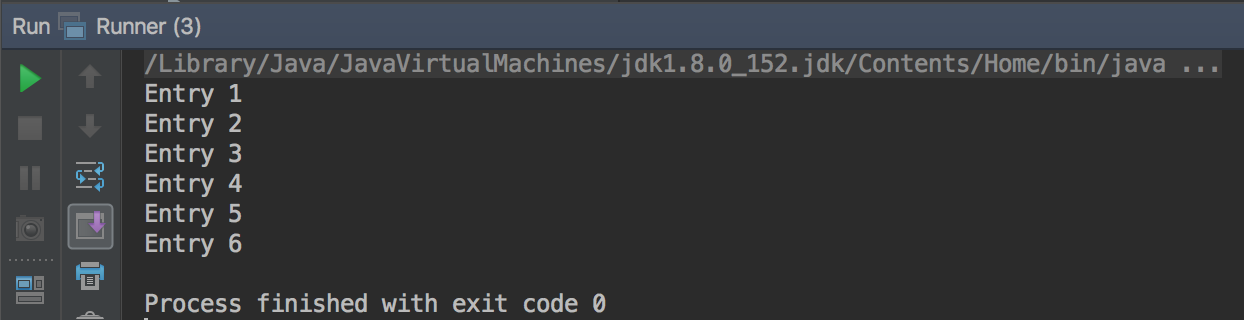
A hashmap of integers and strings containing 6 entries is created in the Runner class below



The printHashContents method shown below takes in a hashmap of integers and strings and prints out the contents of the hashmap



The output from running the Runner class is shown below, with the string values of the hashmap printed out



## I.T. 7 – Polymorphism Example Screenshots \*W6

Demonstrate the use of Polymorphism in a program.