Searching, Linear Search, Binary Search – Revision

Question 1/5. What does the following piece of code do?

```
for (int i = 0; i < arr.length-1; i++)
{
  for (int j = i+1; j < arr.length; j++)
  {
     if( (arr[i].equals(arr[j])) && (i != j) )
     {
        System.out.println(arr[i]);
     }
  }
}
```

1) Print the duplicate elements in the array **(correct answer)**
2) Print the element with maximum frequency
3) Print the unique elements in the array
4) Prints the element with minimum frequency

Question 2/5. Given an array arr = {5, 6, 77, 88, 99} and key = 88; How many iterations are done until the element is found?

1) 1
2) 3
3) 4
4) 2 **(correct answer)**

Question 3/5. Which of the following is not an application of binary search?

1. To find the lower/upper bound in an ordered sequence
2. Union of intervals
3. Debugging
4. To search in unordered list **(correct answer)**

Question 4/5. The array is as follows: 1, 2, 3, 6, 8, 10. Given that the number 17 is to be searched. At which call it tells that there's no such element? (By using linear search(recursive) algorithm)

1. 7th **call (correct answer)**
2. 9th call
3. 17th call
4. The function calls itself infinite number of times

Question 5/5. What is the time complexity of binary search with iteration?

1. O(nlogn)
2. O(logn) **(correct answer)**
3. O(n)
4. O(n^2)