DEPARTMENT OF COMPUTER SCIENCE - THIRD YEAR LICENCE (ISIL)

TD 01

Questions and Answers

1. By creating an index the data will increase in term of size:
   ☒ True.
   ☐ False.
2. Unstructured data means:
   ☒ Has clear semantic forms.
   ☐ Has not clear semantic forms.
3. Information retrieval goal is:
   ☐ Build index of data.
   ☐ Retrieve largest document in the collection.
   ☐ Retrieve non-relevant documents to a user query.
   ☒ Retrieve relevant documents to a user query.
4. Information retrieval match query directly to document data (ex: PDF file):
   ☐ True.
   ☒ False.
5. Describe steps for the following: Given a set of documents, find the documents that contain information about a particular topic.
   1. Start by identifying the key words or phrases associated with the topic.
   2. Use a search engine to search for documents that contain these keywords or phrases.
   3. Review the results and select documents that are relevant to the topic.
   4. Read the documents carefully and determine if they contain information about the topic.
   5. Save the relevant documents for further analysis.

Data Structure & Algorithms

3. T= {15, 25, 36, 1, 1, 25, 63, 8, 8, 8, 1, 1, 1, 8, 9, 8, 96, 8}.

   a. Valeur retournée = 6 ;
   b. Le plus grand nombre d'occurrences dans le tableau
   c. $O(n^2)$
   d. Trier le tableau en utilisant un meilleur algorithme de tri pour arriver à une complexité en $O(n \log(n))$, puis parcourir le tableau en complexité linéaire afin de retourner la valeur qui exprime le nombre d'occurrence de l'élément qui se répète le plus .

```
int Fun(int[] array)
{

    int i = 0, j = 0, m = 0, c = 0;

    while (i<array.Length)
    {
        if (array[i] == array[j])
            c++;
        j++;

        if (j>=array.Length)
        {
            if (c > m)
                m = c;
            c = 0;
            i++;
            j = i;
        }
    }

    return m;
}
```