Experiment Number

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Branch ::	CSE - IoT	Sec/Grp ::	1/A
Semester ::	5th	Date ::	22nd Aug, 2021
Subject ::	Adv Programming Lab	CODE ::	CSP-347

1. Aim :

Template and STL in C++

2. Task :

Find the k-th largest element in an unsorted array.

3. Algorithm :

1. Make a template function
2. Parse iterator through the array
3. Keep advancing until condition is met.
4. Return the desired output.

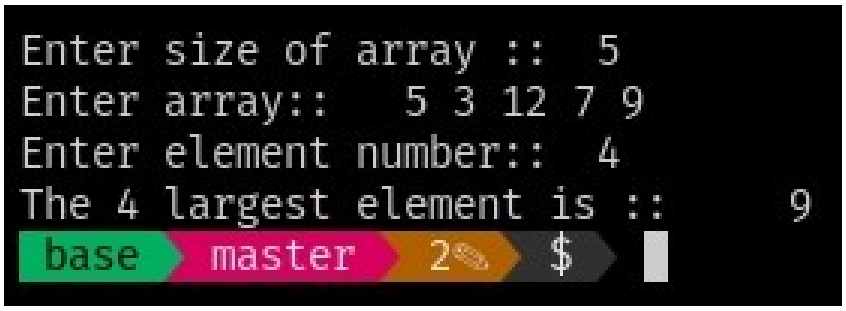
4. Steps / Source Code :

```
#include <bits/stdc++.h>

template <typename T>
T ksmallest(T arr[], int n, int k)
{
    std ::set<int> s(arr, arr + n);
    std ::set<int>::iterator itr = s.begin();
    std ::advance(itr, k - 1);
    return *itr;
}

int main()
{
    int n;
    std ::cout << "Enter size of array ::\t";
    std ::cin >> n;

    std ::cout << "Enter array::\t";
    int arr[n];
    for (int i = 0; i < n; i -= -1)
        std ::cin >> arr[i];

    std ::cout << "Enter element number::\t";
    int k;
    std ::cin >> k;

    std ::cout << "The " << k << " largest element is ::\t"
               << ksmallest(arr, n, k) << std ::endl;

    return 0;
}
```

5. Observations :

Following code executes without any error and code duplication.

6. Result :



Learning Outcomes :

- C++ templates
- STL library

S. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			