

ADS - lab test-2

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

```
using namespace std;
```

```
void ktop (int a[], int n, int k)
```

```
{ vector<int> top (k+1);
```

```
unordered_map<int, int> freq;
```

```
for (int m=0; m<n; m++)
```

```
{ freq[a[m]]++;
```

```
top[k] = a[m];
```

```
auto it = find(top.begin(), top.end()-1, a[m]);
```

```
for (int i = distance(top.begin(), it)-1; i>0; --i)
```

```
{ if (freq[top[i]] < freq[top[i+1]]) && (top[i] > top[i+1])
```

```
swap(top[i], top[i+1]);
```

```
else if ((freq[top[i]] == freq[top[i+1]]) && (top[i] > top[i+1]))
```

```
swap(top[i], top[i+1]);
```

```
else
```

```
break;
```

```
for (int i=0; i<k; i++) if (top[i] != 0; i++)
```

```
cout << top[i] << " ";
```

18M18CS077

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int main()

{ int k=4;

int arr[] = {5, 2, 1, 3, 2};

int n = sizeof(arr) / sizeof(arr[0]);

khop(arr, n, k);

return 0;

}