# VECTOR

## AIM:

To create a vector and perform rotation and reverse the vector.

## ALGORITHM:

· Declare an integer vector and initialize it with elements.

· Read the number of positions k from the user.

· Right rotate the vector by k positions using rotate(begin, end−k, end).

· Display the elements of the vector after right rotation.

· Left rotate the vector by k positions using rotate(begin, begin+k, end).

· Display the elements of the vector after left rotation.

· Reverse the elements of the vector using reverse(begin, end).

· Display the reversed vector.

## PROGRAM:

```
/*
*  Program to rotate elements of vector
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*  Date    : 05/2/2026
*  Filename: Vector.cpp
*  retval  : void
*/

#include <iostream>
#include <vector>
#include <algorithm>
using namespace std;

// Function to display elements of vector
void Display(const vector<int>& vec) {
    for (int i = 0; i < vec.size(); i++) {
        cout << vec[i] << " ";
    }
    cout << endl<<endl;
}

int main() {

    vector<int> v{1, 2, 3, 4, 5};
    int k;
```

```
    cout<<"Enter number of positions to rotate: ";
    cin>>k;

    cout<<"Right Rotate by "<<k<<" positions: ";
    rotate(v.begin(), v.end()-k, v.end());

    Display(v);

    cout<<"Left Rotate by "<<k<<" positions: ";
    rotate(v.begin(), v.begin() + k, v.end());

    Display(v);

    cout<<"Reverse vector: ";
    reverse(v.begin(), v.end());

    Display(v);

    return 0;
}
```

**OUTPUT:**