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#include<iostream>

#include<vector>

using namespace std;

void display(vector<int>&v)

{

for(int i=0;i<v.size();i++)

cout<<""<<v[i]<<" ";

cout<<endl;

}

void scalar(vector<int>&v)

{

int v\_scalar;

cout<<"Enter scalar : ";

cin>>v\_scalar;

for(int i=0;i<v.size();i++)

v[i]\*=v\_scalar;

display(v);

}

void position(vector<int>&v)

{

int v\_position;

cout<<"Enter position : ";

cin>>v\_position;

vector<int>::iterator itr2=v.begin();

itr2+=v\_position;

v.insert(itr2,1,100);

display(v);

}

void it(vector<int>&v)

{

int e;

cout<<"Iterator created"<<endl;

vector<int>::iterator itr1=v.begin();

itr1=itr1+2;

cout<<"Enter element : ";

cin>>e;

v.insert(itr1,1,e);

display(v);

}

int main()

{

int choice;

vector<int>v;

cout<<"Initial size of vector : "<<v.size()<<endl;

int v\_element,v\_size;

cout<<"Enter size of vector : ";

cin>>v\_size;

cout<<"Enter "<<v\_size<<" elements : "<<endl;

for(int i=0;i<v\_size;i++)

{

cin>>v\_element;

v.push\_back(v\_element);

}

do

{

cout<<endl;

cout<<"1.Multiply all elements with a scalar"<<endl;

cout<<"2.Insert an element at a position"<<endl;

cout<<"3.Insert an element in the beginning"<<endl;

cout<<"4.Display the vector."<<endl;

cout<<"5.Exit."<<endl;

cout<<endl<<"Enter your choice : ";

cin>>choice;

switch(choice)

{

case 1 : scalar(v);

break;

case 2 : position(v);

break;

case 3 : it(v);

break;

case 4 : display(v);

break;

case 5 : cout<<"Exiting";

break;

default : cout<<"Invalid input!"<<endl;

}

} while(choice != 5);

return 0;

}