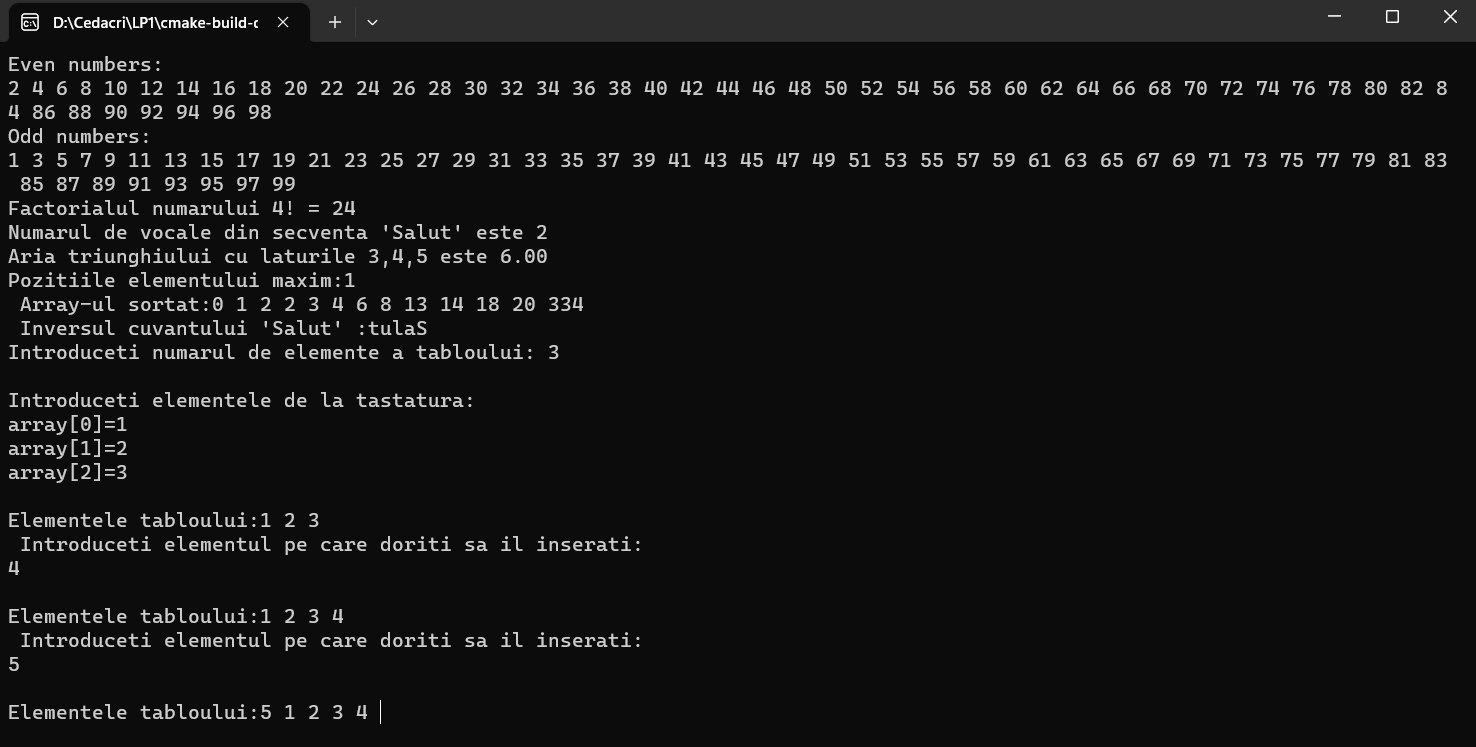
**Codul programului:**

#include <stdio.h>  
#include <math.h>  
#include <malloc.h>  
  
void printEvenNumbers(int limit){  
 printf("Even numbers: \n");  
 for(int i=2;i<limit;i=i+2)  
 printf("%i ",i);  
  
}  
void printOdd(int limit){  
 int i=1;  
 printf("\nOdd numbers: \n");  
 while(i<limit){  
  
 printf("%i ",i);  
 i=i+2;  
 }  
}  
int factorial(int n){  
 if(n==0 || n==1) return 1;  
 else return n\* factorial(n-1);  
}  
float triangleArea(int a,int b,int c){  
 if (a<b+c && b<a+c && c < a+b ) {  
 float p=(a+b+c)/2;  
 return sqrt(p\*(p-a)\*(p-b)\*(p-c));  
 }  
 else return 0;  
}  
void printMaxPosition(int array[],int n){  
 int max=array[0];  
 for(int i=0;i<n;i++){  
 if(array[i]>max) max=array[i];  
 }  
 for (int i = 0; i < n; i++) {  
 if(array[i]==max) printf("%i ",i);  
 }  
}  
int check(int n){  
 return (n==65 || n==69 || n==73 || n==79 || n==85 || n==97 || n==101 || n==105 || n==111 || n==117) ? 1:0;  
}  
int numbersVowels(char sequence[],int lenght){  
 int number=0;  
 for (int i = 0; i < lenght; i++) {  
 if(check(sequence[i])) number++;  
 }  
 return number;  
}  
void sortArray(int array[],int n,int pivot,int i){  
 if(i<=n) {  
 int num = 0;  
 for (int j = i; j < n; j++)  
 if (array[j] < pivot) num++;  
 if (num == 0) sortArray(array, n, array[i + 1], i + 1);  
 else {  
 if(array[num+i]==pivot){  
 int temp = array[num + i+1];  
 array[num + i+1] = pivot;  
 array[i] = temp;  
 sortArray(array, n, array[i+1], i+1);  
 }  
 else {  
 int temp = array[num + i];  
 array[num + i] = pivot;  
 array[i] = temp;  
 sortArray(array, n, array[i], i);  
 }  
 }  
 }  
}  
void print(int \*array,int n){  
 printf("\nElementele tabloului:");  
 for(int i=0;i<n;i++){  
 printf("%d ",array[i]);  
 }  
}  
void insertEnd(int \*array,int n){  
 array=(int\*)realloc(array, n+1\*sizeof(int));  
 int newElement;  
 printf("\n Introduceti elementul pe care doriti sa il inserati: \n");  
 scanf("%d",&newElement);  
 array[n]=newElement;  
 print(array,n+1);  
}  
void insertStart(int \*array,int n){  
 array=(int\*)realloc(array, n+1\*sizeof(int));  
 int newElement;  
 printf("\n Introduceti elementul pe care doriti sa il inserati: \n");  
 scanf("%d",&newElement);  
 for(int i=n;i>0;i--)  
 array[i]=array[i-1];  
 array[0]=newElement;  
 print(array,n+1);  
}  
void revereseString(char \*sequence,int lenght){  
 char reverse[lenght];  
 int j=0;  
 for(int i=lenght-1;i>=0;i--)  
 reverse[j++]=sequence[i];  
 printf("%s",reverse);  
  
}  
void sevenTask(){  
 int n;  
 printf("\nIntroduceti numarul de elemente a tabloului: ");  
 scanf("%d",&n);  
 int \*array= malloc(n \* sizeof(int));  
 printf("\nIntroduceti elementele de la tastatura:\n");  
 for(int i=0;i<n;i++){  
 printf("array[%i]=",i);  
 scanf("%d",&array[i]);  
 }  
 print(array,n);  
 insertEnd(array,n);n++;  
 insertStart(array,n);n++;  
 getchar();  
}  
int main() {  
 printEvenNumbers(100);  
 printOdd(100);  
 printf("\nFactorialul numarului 4! = %i ", factorial(4));  
 printf("\nNumarul de vocale din secventa 'Salut' este %i ", numbersVowels("Salut",5));  
 printf("\nAria triunghiului cu laturile 3,4,5 este %.2f", triangleArea(3,4,5));  
 int array[]={4,6,2,1,3,8,13,20,334,18,14,0,2};  
 printf("\nPozitiile elementului maxim:");  
 printMaxPosition(array,5);  
 sortArray(array,13,array[0],0);  
 printf("\n Array-ul sortat:");  
 for(int i=0;i<13;i++)  
 printf("%i ",array[i]);  
 printf("\n Inversul cuvantului 'Salut' :");  
 revereseString("Salut",5);  
 sevenTask();  
  
 getchar();  
 return 0;  
}

**Rezultatele compilarii:**

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