

Practical-1

Aim: . WAP to check given string is numeric or not.

Program:

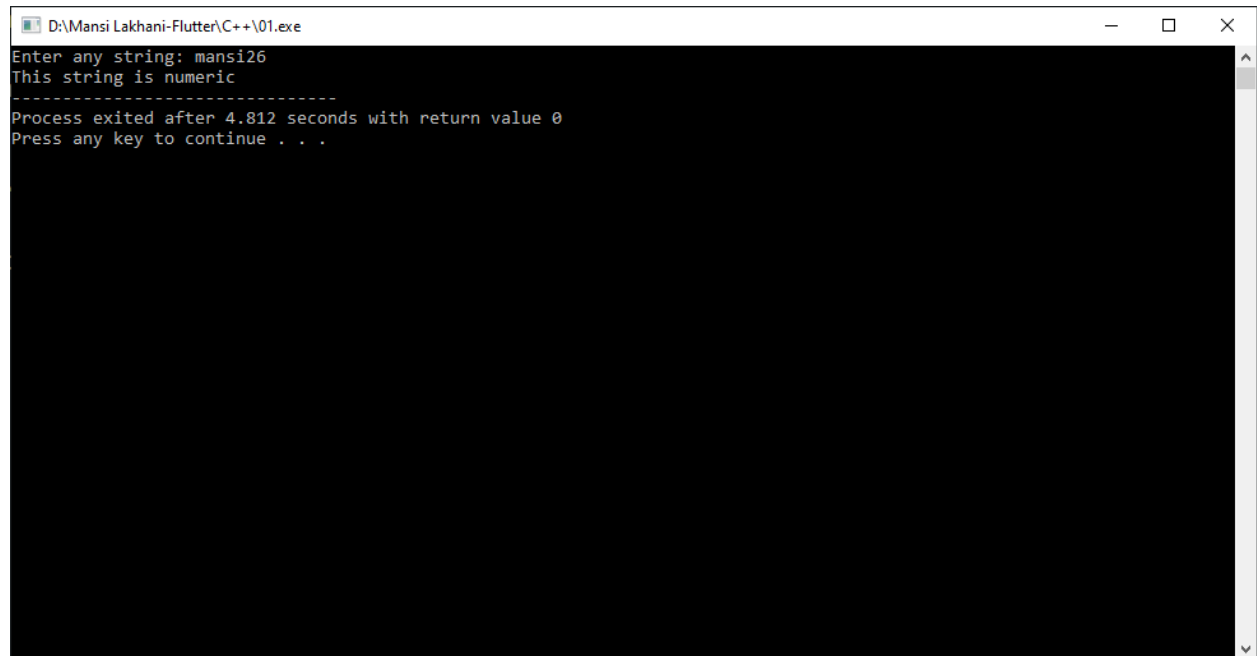
```
#include<iostream>
using namespace std;

int main()
{
    int i,n=0,j=0,k=0;
    char a[1000];

    cout << "Enter any string: ";
    cin >> a;

    for(i=0; i<=a[i];i++)
    {
        if(a[i]>='0' && a[i]<='9')
        {
            j++;
        }
        else
        {
            k++;
        }
    }
    if(j>0)
    {
        cout << "This string is numeric";
    }
    else
    {
        cout << "This string isnot numeric";
    }
    return 0;
```

Output:



```
D:\Mansi Lakhani-Flutter\C++\01.exe
Enter any string: mansi26
This string is numeric
-----
Process exited after 4.812 seconds with return value 0
Press any key to continue . . .
```

Practical-2

Aim: .WAP to find leap years from 2000 to 3000.

Program:

```
#include<iostream>
using namespace std;

int main()
{
    int i;
    cout << "Leap year from 2000 to 3000 : " <<endl <<endl;

    for(i=2000;i<=3000;i++)
    {
        if(i%4==0)
        {
            cout << i << "\t";

        }
    }
    return 0;
}
```

Output:

```
D:\Mansi Lakhani-Flutter\C++\02.exe
Leap year from 2000 to 3000 :
2000    2004    2008    2012    2016    2020    2024    2028    2032    2036    2040    2044    2048    2052    2056
2060    2064    2068    2072    2076    2080    2084    2088    2092    2096    2100    2104    2108    2112    2116
2120    2124    2128    2132    2136    2140    2144    2148    2152    2156    2160    2164    2168    2172    2176
2180    2184    2188    2192    2196    2200    2204    2208    2212    2216    2220    2224    2228    2232    2236
2240    2244    2248    2252    2256    2260    2264    2268    2272    2276    2280    2284    2288    2292    2296
2300    2304    2308    2312    2316    2320    2324    2328    2332    2336    2340    2344    2348    2352    2356
2360    2364    2368    2372    2376    2380    2384    2388    2392    2396    2400    2404    2408    2412    2416
2420    2424    2428    2432    2436    2440    2444    2448    2452    2456    2460    2464    2468    2472    2476
2480    2484    2488    2492    2496    2500    2504    2508    2512    2516    2520    2524    2528    2532    2536
2540    2544    2548    2552    2556    2560    2564    2568    2572    2576    2580    2584    2588    2592    2596
2600    2604    2608    2612    2616    2620    2624    2628    2632    2636    2640    2644    2648    2652    2656
2660    2664    2668    2672    2676    2680    2684    2688    2692    2696    2700    2704    2708    2712    2716
2720    2724    2728    2732    2736    2740    2744    2748    2752    2756    2760    2764    2768    2772    2776
2780    2784    2788    2792    2796    2800    2804    2808    2812    2816    2820    2824    2828    2832    2836
2840    2844    2848    2852    2856    2860    2864    2868    2872    2876    2880    2884    2888    2892    2896
2900    2904    2908    2912    2916    2920    2924    2928    2932    2936    2940    2944    2948    2952    2956
2960    2964    2968    2972    2976    2980    2984    2988    2992    2996    3000

-----
Process exited after 0.05401 seconds with return value 0
Press any key to continue . . .
```

Practical-3

Aim: .WAP to convert given string into toggle case.

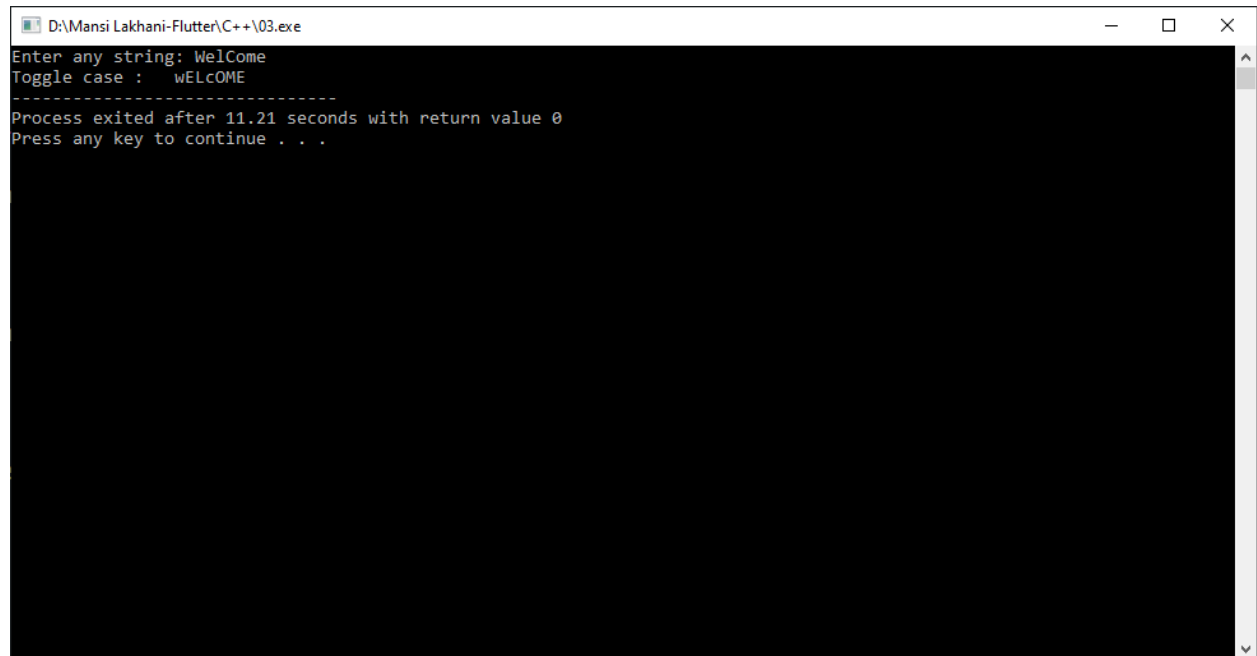
Program:

```
#include<iostream>
using namespace std;

int main()
{
    int i;
    char a[1000];
    cout << "Enter any string: ";
    cin >> a;

    for(i=0;i<a[i];i++)
    {
        if(a[i]>=65 && a[i]<=95)
        {
            a[i]=a[i]+32;
        }
        else
        {
            a[i]=a[i]-32;
        }
    }
    cout << "Toggle case : " <<a;
}
```

Output:



A screenshot of a Windows command prompt window. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C++\03.exe" and includes standard minimize, maximize, and close buttons. The command prompt area has a black background with white text. The text displayed is as follows:

```
Enter any string: WelCome
Toggle case :  wELcOME
-----
Process exited after 11.21 seconds with return value 0
Press any key to continue . . .
```

The output shows that the program successfully converted the input string "WelCome" to "wELcOME" and then terminated with a return value of 0. A vertical scrollbar is visible on the right side of the command prompt window.

Practical-4

Aim: . WAP to check if a given character is vowel or consonant.

Program:

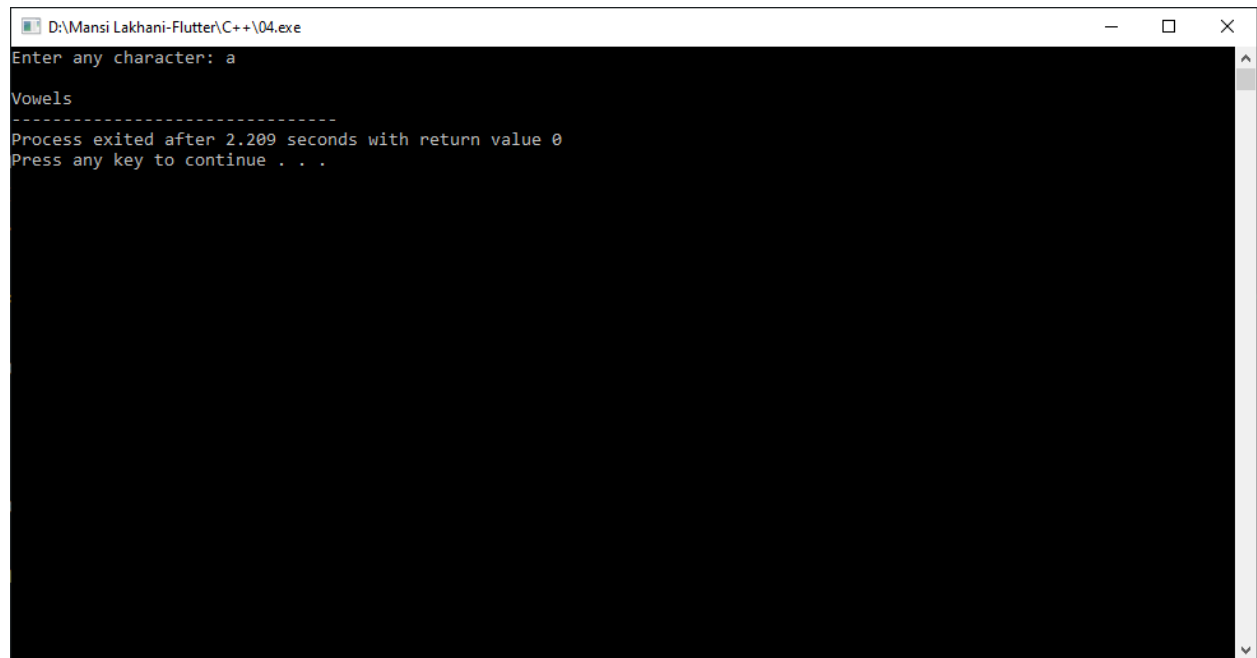
```
#include<iostream>
using namespace std;

int main()
{

    char n;
    cout << "Enter any character: ";
    cin >> n;

    if(n=='a' || n=='e' || n=='i' || n=='o' || n=='u' || n=='A' || n=='E' || n=='I' || n=='O' || n=='U')
    {
        cout << endl << "Vowels";
    }
    else
    {
        cout << endl << "Constant";
    }
    return 0;
}
```

Output:



A screenshot of a Windows command prompt window. The title bar at the top reads "D:\Mansi Lakhani-Flutter\C++\04.exe" and includes standard minimize, maximize, and close buttons. The command prompt area has a black background with white text. The text displayed is as follows:

```
Enter any character: a
Vowels
-----
Process exited after 2.209 seconds with return value 0
Press any key to continue . . .
```

The output shows that the user entered the character 'a', which was then used to print the word "Vowels" followed by a series of dashes. The program then exited after 2.209 seconds with a return value of 0, and the prompt asks the user to press any key to continue.

Practical-5

Aim: . WAP to find square root of given numbers from array elements.

Program:

```
#include<iostream>
#include<math.h>
using namespace std;

int main()
{
    int i,n;
    float a[n],b[n];

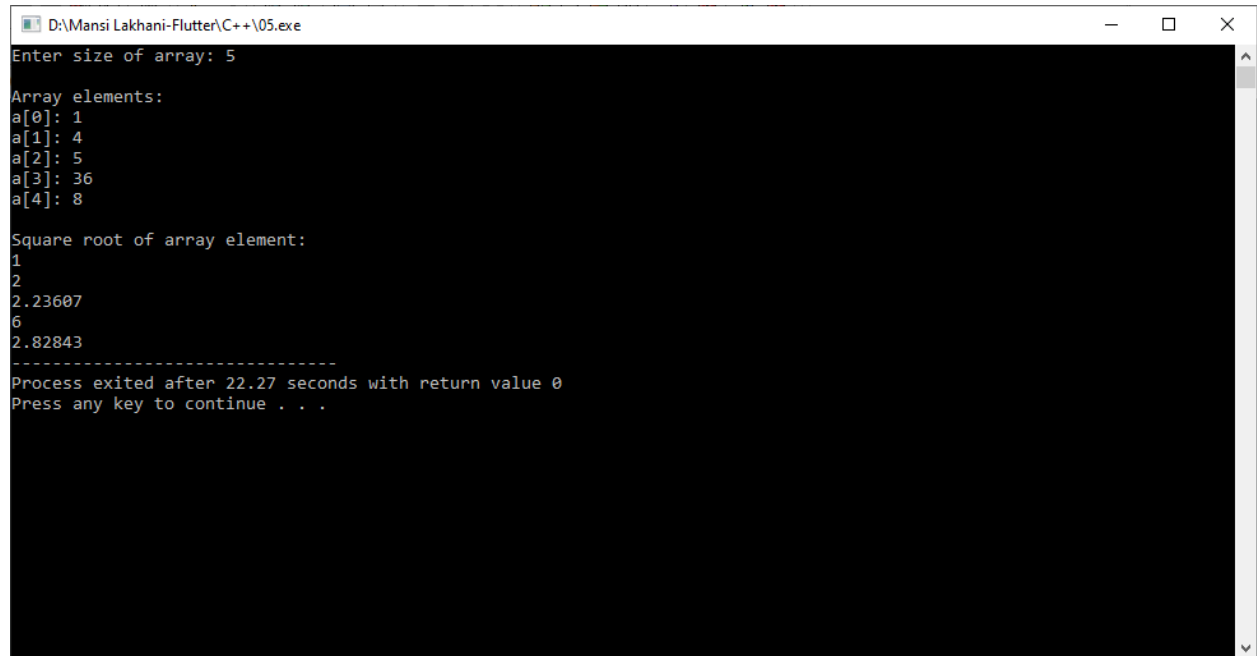
    cout << "Enter size of array: ";
    cin >> n;

    cout << endl << "Array elements: " << endl;

    for(i=0;i<n;i++)
    {
        cout << "a[" << i << "]: ";
        cin >> a[i];
    }

    cout << endl << "Square root of array element: ";
    for(i=0;i<n;i++)
    {
        b[i]=sqrt(a[i]);
        cout << endl << b[i] ;
    }
}
```

Output:



```
D:\Mansi Lakhani-Flutter\C++\05.exe
Enter size of array: 5

Array elements:
a[0]: 1
a[1]: 4
a[2]: 5
a[3]: 36
a[4]: 8

Square root of array element:
1
2
2.23607
6
2.82843
-----
Process exited after 22.27 seconds with return value 0
Press any key to continue . . .
```

Practical-6

Aim: . WAP to generate cube of given 5 numbers and make an array of that generated cubes.

Program:

```
#include<iostream>
#include<math.h>
using namespace std;

int main()
{
    int i,n;
    float a[n],b[n];

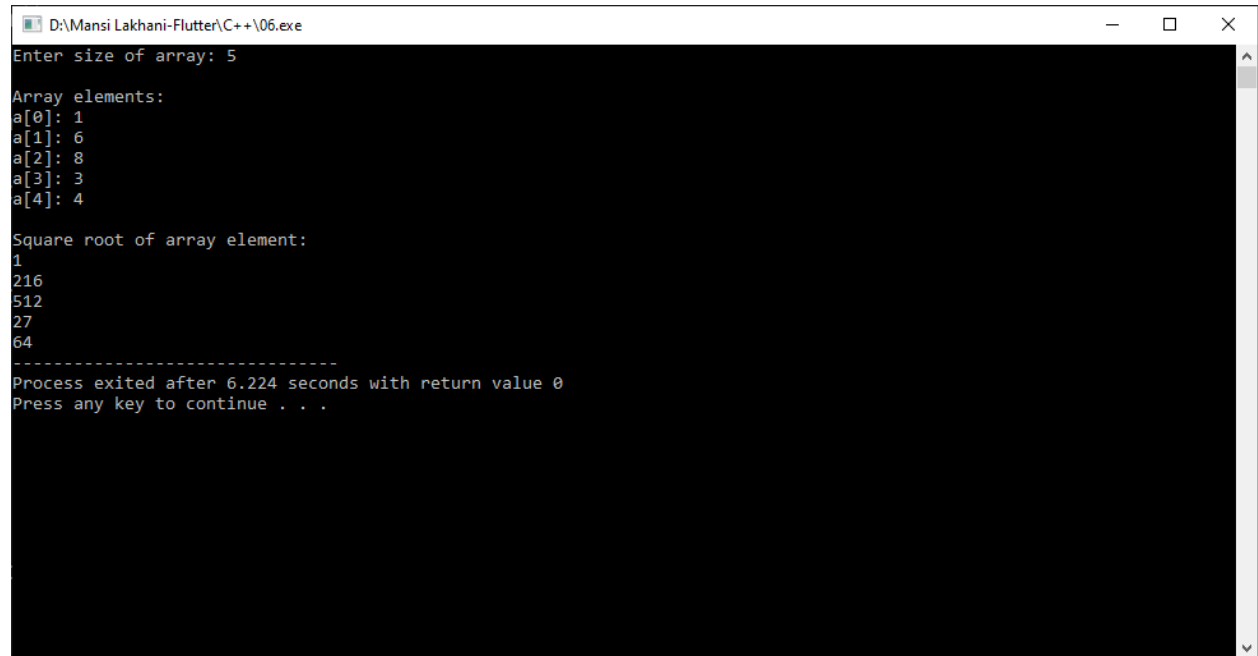
    cout << "Enter size of array: ";
    cin >> n;

    cout << endl << "Array elements: " << endl;

    for(i=0;i<n;i++)
    {
        cout << "a[" << i << "]: ";
        cin >> a[i];
    }

    cout << endl << "Square root of array element: ";
    for(i=0;i<n;i++)
    {
        b[i]=a[i]*a[i]*a[i];
        cout << endl << b[i] ;
    }
}
```

Output:

A screenshot of a Windows command prompt window titled "D:\Mansi Lakhani-Flutter\C++\06.exe". The window has standard Windows window controls (minimize, maximize, close) in the top right corner. The text inside the window shows the execution of a C++ program. It starts with the prompt "Enter size of array: 5". Then it displays "Array elements:" followed by five lines of input: "a[0]: 1", "a[1]: 6", "a[2]: 8", "a[3]: 3", and "a[4]: 4". Next, it shows "Square root of array element:" followed by four lines of output: "1", "216", "512", and "27". There is a line of dashes "-----" after the output. The final lines of the program are "Process exited after 6.224 seconds with return value 0" and "Press any key to continue . . .".

```
D:\Mansi Lakhani-Flutter\C++\06.exe
Enter size of array: 5

Array elements:
a[0]: 1
a[1]: 6
a[2]: 8
a[3]: 3
a[4]: 4

Square root of array element:
1
216
512
27
-----
Process exited after 6.224 seconds with return value 0
Press any key to continue . . .
```