```
string friends[] = {"Alan", "Bob", "Carol", "David", "Ellen",
                    "Fred", "Grace", "Henry", "Ian", "Jen"};

for (string i : friends) {
  cout << i << endl;
}
```

Traversing an array using enhanced for loop

```
string friends[] = {"Alan", "Bob", "Carol", "David", "Ellen",
                    "Fred", "Grace", "Henry", "Ian", "Jen"};

cout << sizeof(friends) / sizeof(friends[0]) << endl;
```

Example of using sizeof operator to find length of an array

what to do for a value other than zero to assign same value to all elements of an array?

▶ What about for loop?

```
for (int i = 0; i < N; i++) {
    arr[i] = value;
}
```

5. Initializing with the help of loop

```
arr[i] = new_value;
```

Update array element

Checking the size of an array and array element using sizeof()

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

int main()
{
    int arr[] = { 1, 2, 3, 4, 5 };

    // Size of one element of an array
    cout << "Size of arr[0]: " << sizeof(arr[0]) << endl;

    // Size of array 'arr'
    cout << "Size of arr: " << sizeof(arr) << endl;

    // Length of an array
    int n = sizeof(arr) / sizeof(arr[0]);

    cout << "Length of an array: " << n << endl;

    return 0;
}
```

Access the memory address of an array using address(&) operator

```cpp
// Printing address of the arrary using array name
cout << "Memory address of arr: " << &arr << endl;
```

```cpp
1  #include<iostream>
2  using namespace std;
3
4  int main(){
5
6  int arr[5];
7
8  cout<<&arr<<endl;
9  cout<<&arr[0]<<endl;
10 cout<<&arr[1]<<endl;
11 cout<<&arr[2];
12 }
13
```
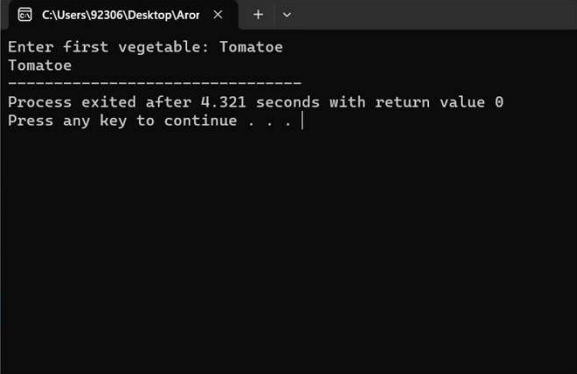
& Operator returns the starting address of an array element

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

int main(){

string vegies[5];

cout<<"Enter first vegetable: ";
cin>>vegies[0];
cout<<vegies[0];
```

```
C:\Users\92306\Desktop\Aror   ×    +   ∨
Enter first vegetable: Tomatoe
Tomatoe
----------------------------------
Process exited after 4.321 seconds with return value 0
Press any key to continue . . .
```

Taking Input inside an array

Taking Multiple Inputs in an array

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

int main(){

string vegies[5];
int array_length=sizeof(vegies)/sizeof(vegies[0]);
for(int i=0; i<array_length; i++){
    cout<<"Enter Vegetable "<<i+1<<" :";
    cin>>vegies[i];
}

return 0;
```
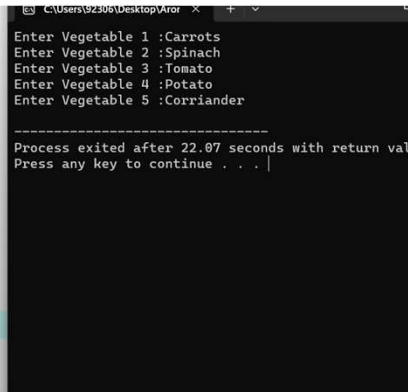
```
C:\Users\92306\Desktop\Aror   X   +   ∨
Enter Vegetable 1 :Carrots
Enter Vegetable 2 :Spinach
Enter Vegetable 3 :Tomato
Enter Vegetable 4 :Potato
Enter Vegetable 5 :Corriander

------------------------------------
Process exited after 22.07 seconds with return valu
Press any key to continue . . .
```

Activity (Must complete before coming tomorrow)

▶ Declare an array to store the weight of 5 persons

▶ Input the weight of 5 persons from the user

▶ Find out the average weight value (average weight will be sum of all the weights divided by number of persons)