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Ex-1: C++ parameter vs argument

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

void myFunction(string fname){
    cout << fname << "Mogulkoc\n";
}

int main(){
    myFunction("Yesim ");
    myFunction("Aybey ");
    myFunction ("Bartu ");
    return 0;
}
```

string fname is : parameter
Yesim, Aybey and Bartu : arguments

Yesim Mogulkoc
Aybey Mogulkoc
Bartu Mogulkoc

Ex-2: C++ multiple parameters

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

void myFunction(string fname, int age){
    cout << fname << "Mogulkoc." << age << " years old. \n";
}

int main(){
    myFunction("Yesim ", 30);
    myFunction("Aybey ", 38);
    myFunction ("Bartu ", 8);
    return 0;
}
```

Yesim Mogulkoc.30 years old.
Aybey Mogulkoc.38 years old.
Bartu Mogulkoc.8 years old.

Ex-3: return-one parameter

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

int myFunction(int x) {
    return 10 + x;
}

int main() {
    cout << myFunction(5);
    return 0;
}
```

Ex-4: return-double parameters

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

int myFunction(int x, int y) {
    return x + y;
}

int main() {
    cout << myFunction(15, 5);
    return 0;
}
```

Ex-5: return-double parameters, dependent to the result

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

int myFunction(int x, int y) {
    return x + y;
}

int main() {
    int z = myFunction(15, 10);
    cout << z;
    return 0;
}
```

Pass with reference in C++

- We need to this method to develop to change the value of argument.
- In this method we use *swap*.

Ex-6: *swap*

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

void swapNums(int &x, int &y) {
    int z = x;
    x = y;
    y = z;
}

int main() {
    int ilkNum = 10;
    int ikinciNum = 20;

    cout << "before swap: " << "\n";
    cout << ilkNum << ikinciNum << "\n";
```

```
    swapNums(ilkNum, ikinciNum);

    cout << "after swap: " << "\n";
    cout << ilkNum << ikinciNum << "\n";

    return 0;
}
```

```
before swap:
1020
after swap:
2010
```


Ex-7: Array example

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

int main() {
    array< int, 5 > items = { 1, 2, 3, 4, 5};

    //yenilemeden önce items'ları yazdır
    cout << "items before modification: ";
    for (int item : items)
        cout << item << " ";

    //items elemanlarını 2 ile çarp
    for (int &itemRef : items)
        itemRef *= 2;
```

```
//yenilemeden sonra items yazdır
cout << "\nitems after modification: ";
for (int item : items)
    cout << item << " ";

    cout << endl;
} // main fonksiyonu sonu
```

```
items before modification: 1 2 3 4 5
items after modification: 2 4 6 8 10
```

Ex-8: Convert to Celcius to Fahrenheit

```
#include<iostream>

using namespace std;

int main()
{
    float cel, fah;
    cout << "Celcius: ";
    cin >> cel;
    fah = cel * 9/5 + 32;
    cout << "Fahrenheit: " << fah;
    return 0;
}
```

Celcius: 45
Fahrenheit: 113

Ex-9: Adding two matrix

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

int main(){
    int satir, sutun, girdi;

    cout << "Olusturulan Matris;\n--> Satir: ";
        cin >> satir;
    cout << "--> Sutun: ";
        cin >> sutun;

    int matris1[satir][sutun] = {};
    int matris2[satir][sutun] = {};
    int sonuc[satir][sutun] = {};
```

Ex-9: adding matrix-2

```
cout << "\n1. MATRIS\n";
for(int i=0; i<satir; i++) {
    for(int j=0; j<sutun; j++) {
        cout << i+1 << ". Satir " << j+1 << ". Sutun: ";
        cin >> girdi;
        matris1[i][j] = girdi;
    }
}
cout << "1. Matris Tamamlandi.\n\n";
```

Ex-9: adding matrix-3

```
cout << "2. MATRIS\n";
for(int i=0; i<satir; i++) {
    for(int j=0; j<sutun; j++) {
        cout << i+1 << ". Satir " << j+1 << ". Sutun: ";
        cin >> girdi;
        matris2[i][j] = girdi;
    }
}
cout << "2. Matris Tamamlandi.\n\n";
```

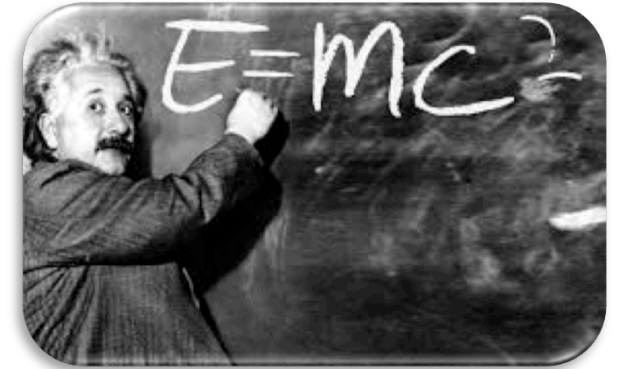
Ex-9: adding matrix-4

```
// İKİ MATRİSİN TOPLANMASI
for(int k=0; k<satir; k++) {
    for(int t=0; t<sutun; t++) {
        sonuc[k][t] = matris1[k][t] + matris2[k][t];
    }
}

// TOPLAMIN EKRANA YAZDIRILMASI
cout << "Sonuc;\n\n";
for(int a=0; a<satir; a++) {
    for(int b=0; b<sutun; b++) {
        cout << "\t" << sonuc[a][b];
    }
    cout << endl;
}
}
```

HW:

Write a code for $E=mc^2$



“Computers are incredibly fast, accurate and stupid;
humans are incredibly slow, inaccurate and brilliant;
together they are powerful beyond imagination.”

Albert Einstein