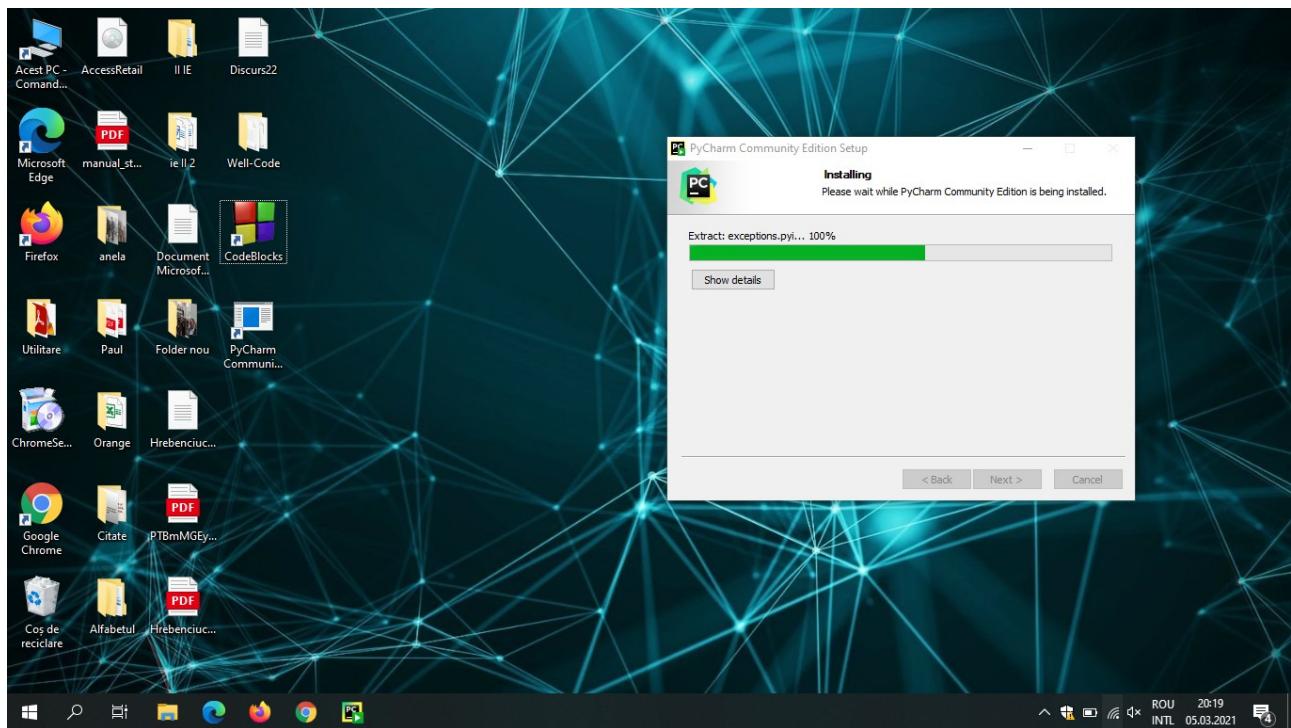
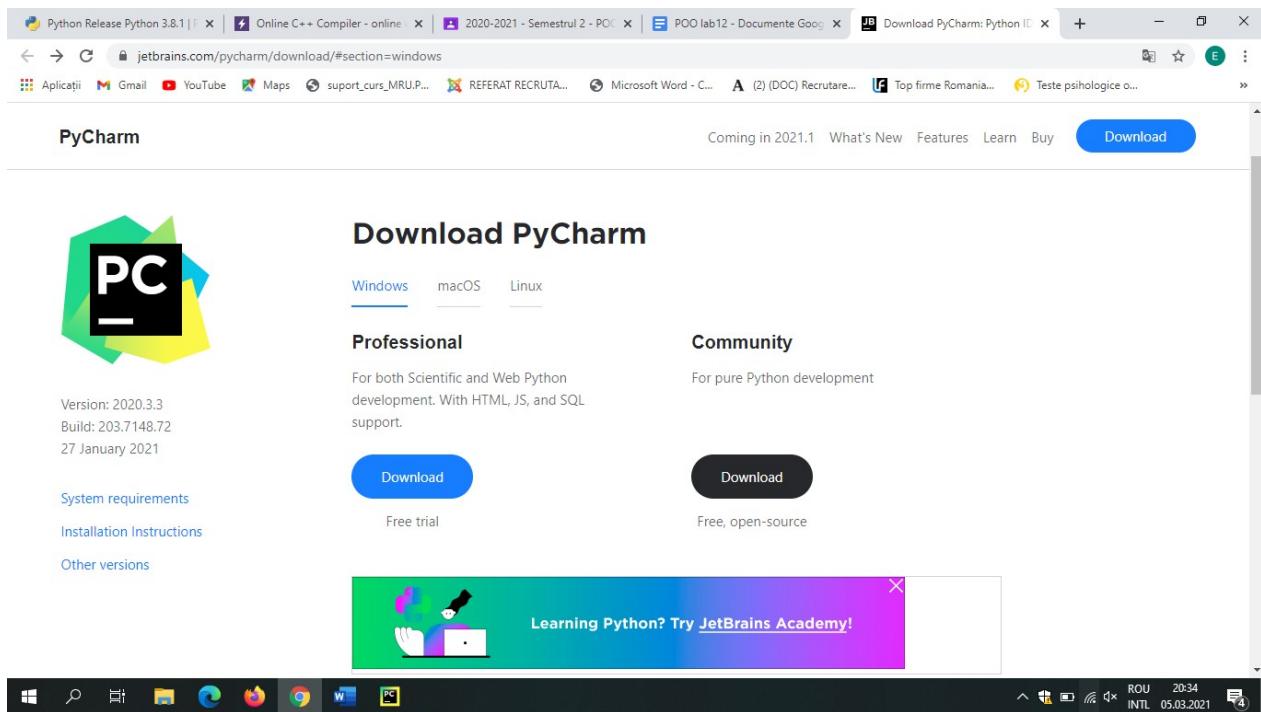
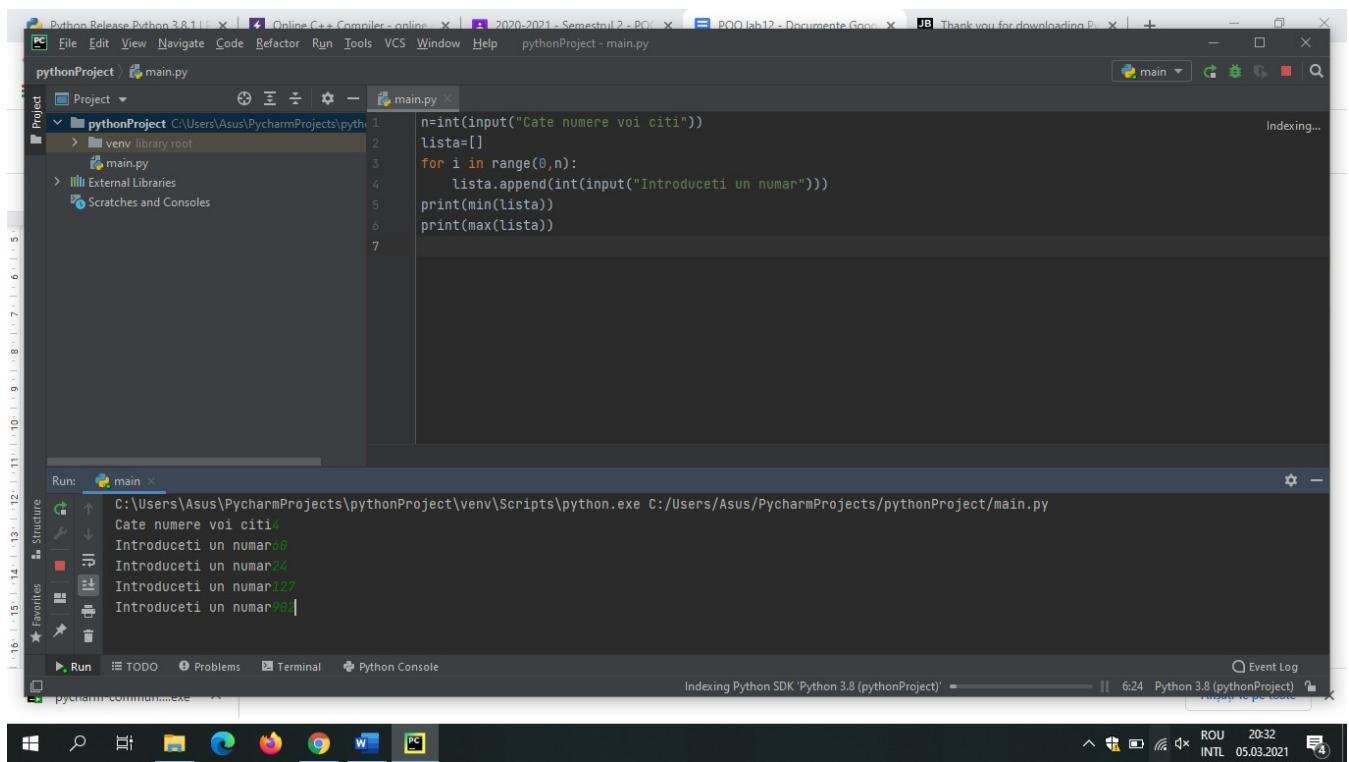
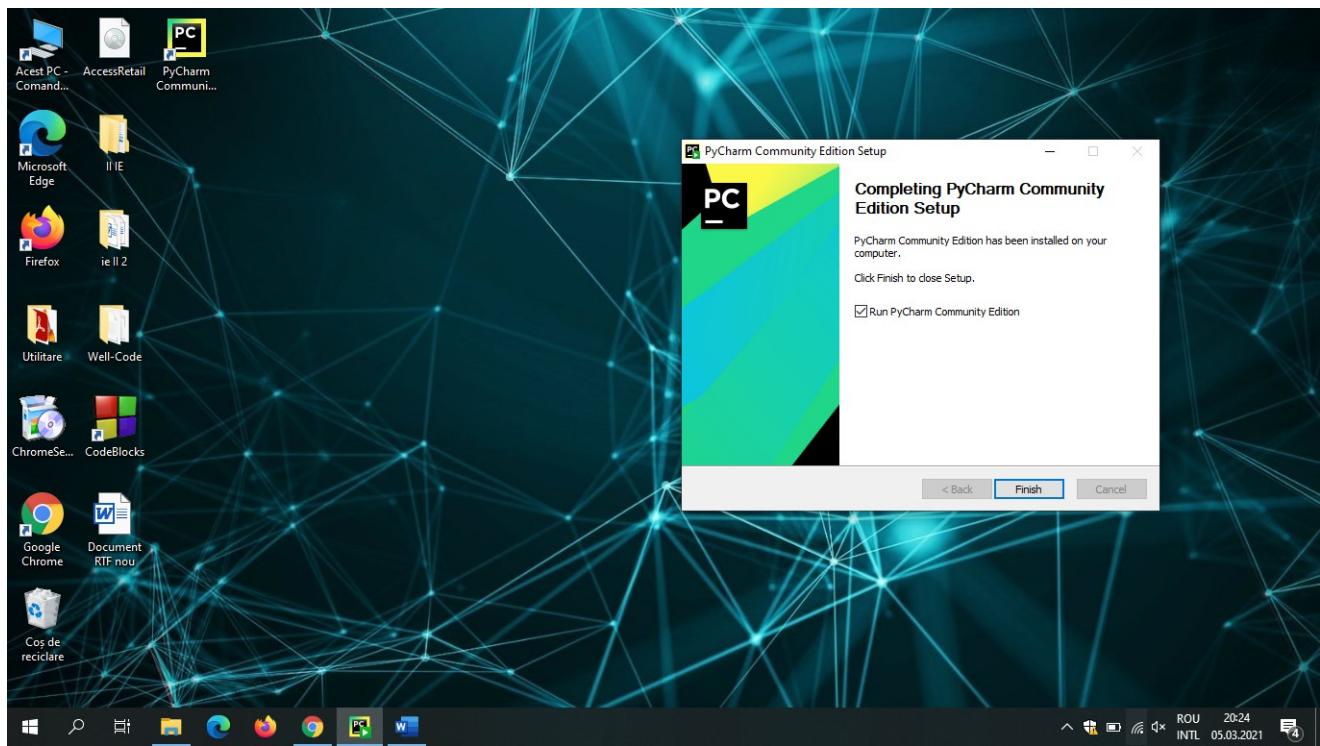


# Laborator 1

## Instalare setup pentru Python.

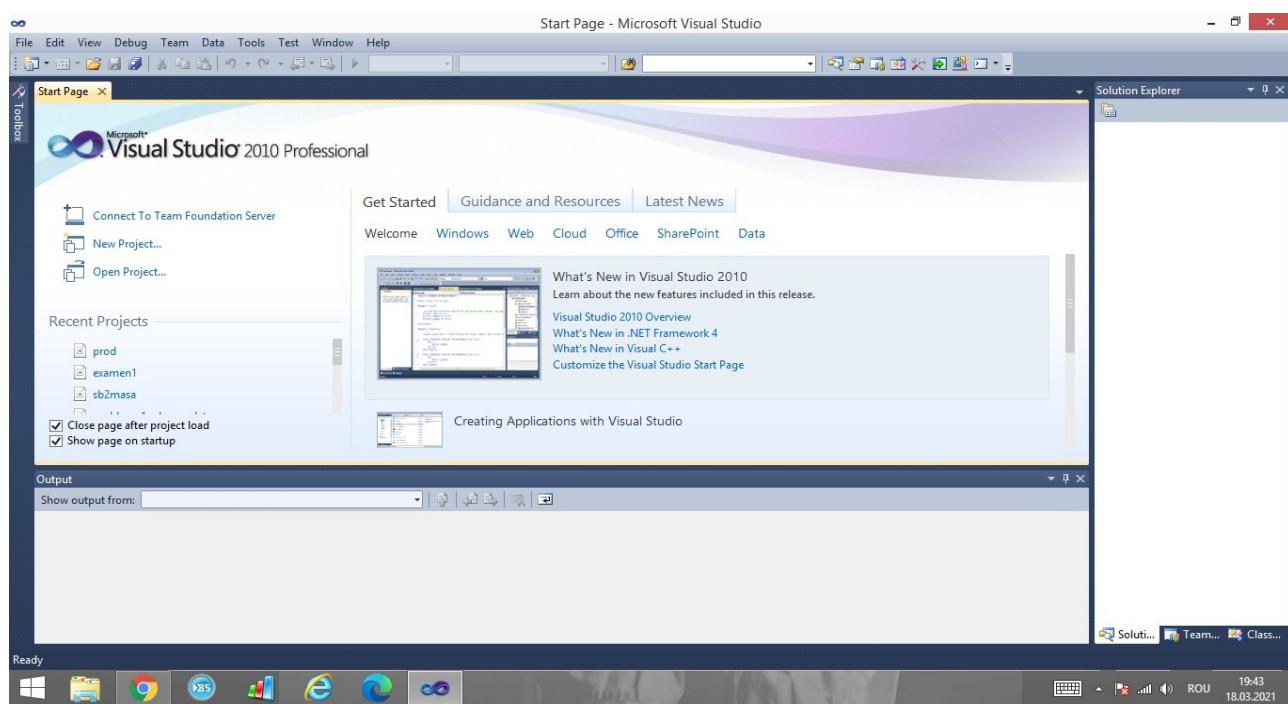


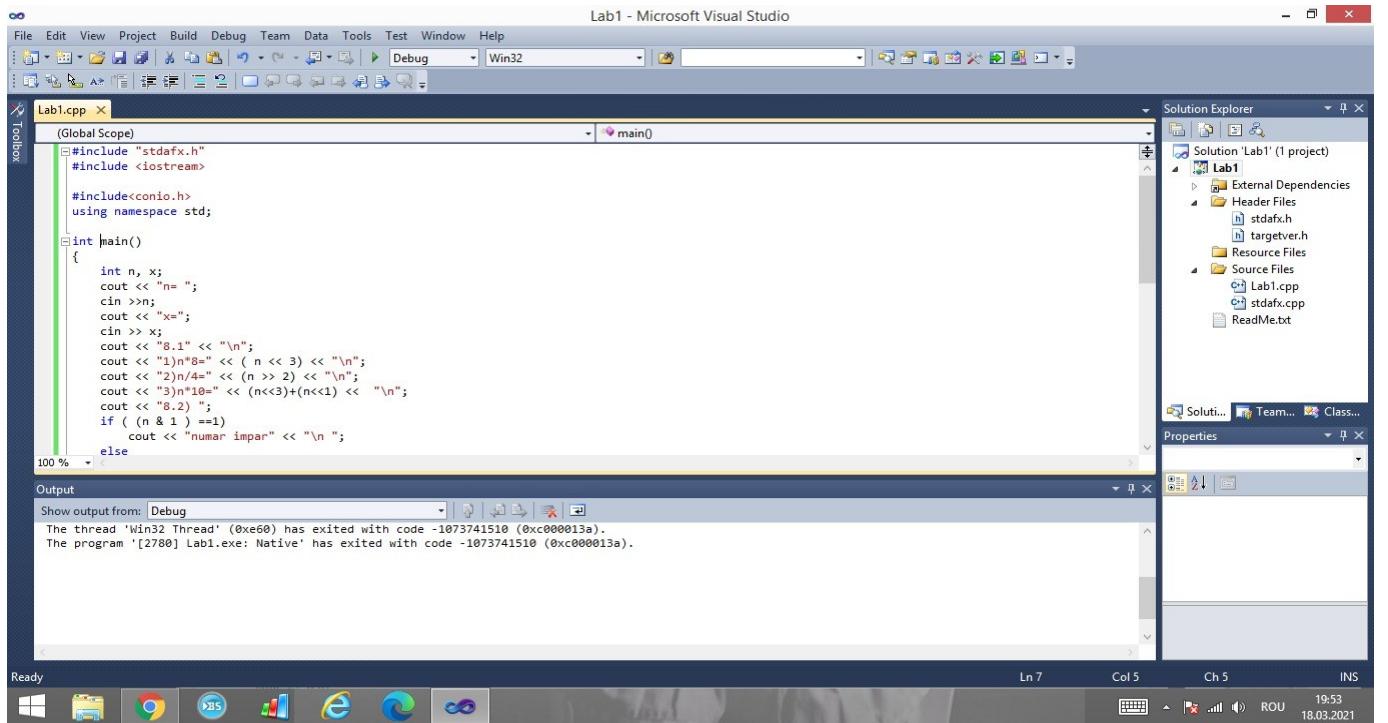


## Instalare setup pentru C++.

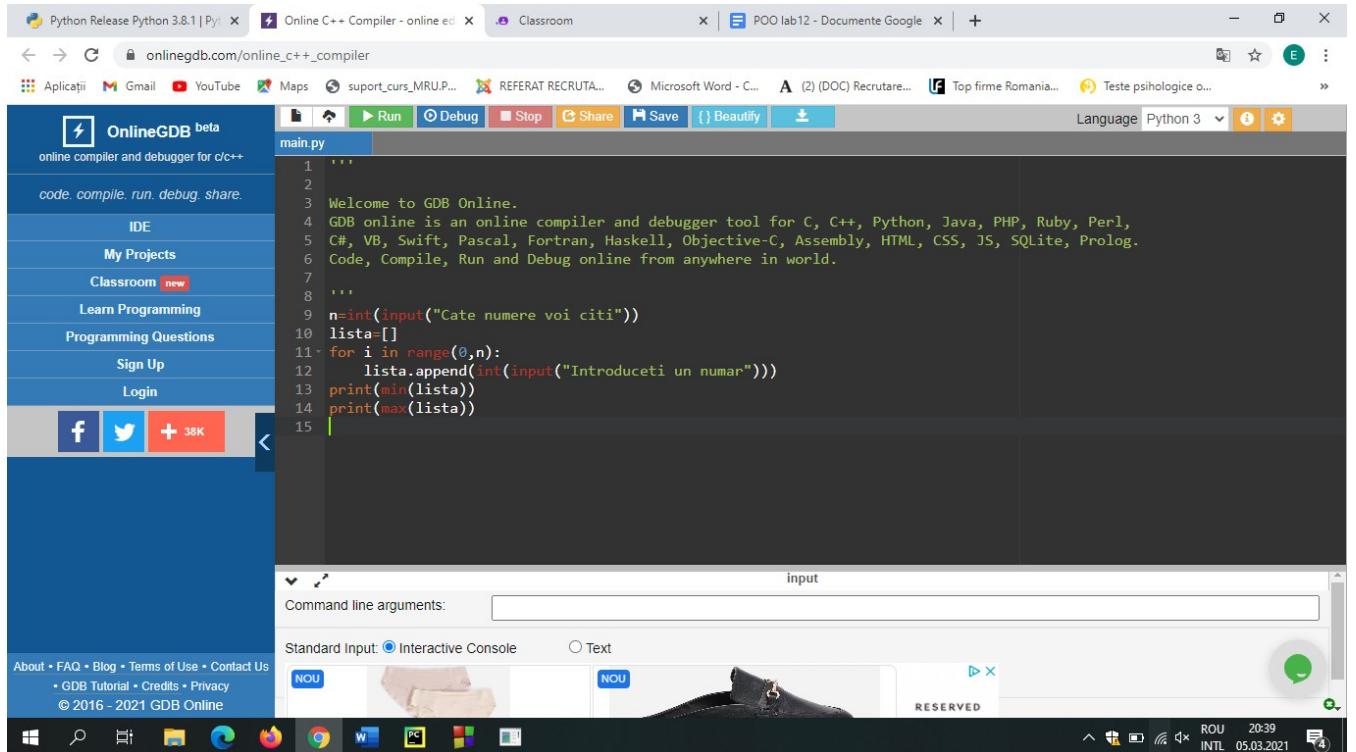
```
#include <iostream>
using namespace std;
int main()
{
    int n, x[100];
    cin >> n;
    for (int i=0; i<n; i++)
        cin >> x[i];
    int max = x[0], min = x[0];
    for (int i=1; i<n; i++)
    {
        if (min > x[i])
            min = x[i];
        if (max < x[i])
            max = x[i];
    }
    cout << min << endl << max << endl;
    return 0;
}
```

Process returned 0 (0x0) execution time : 33.386 s  
Press any key to continue.





## Identificare IDE online



## Laborator 2

C++

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

int main()
{
    int n, k;
    cout << "da-ti numarul dorit n: ";
    cin >> n;
    cout << "da-ti numarul dorit k: ";
    cin >> k;
    cout << "8.1.1 " << endl << " n*8 = " << n * 8<<endl;
    cout << "8.1.2 " << endl << " n/4= " << n/4<<endl;
    cout << "8.1.3 " << endl << " n*10 (pe biti)= " << n * ((1 << k) + 2) << endl;
    cout << "8.2 " << endl;
    if ((n & 1) == 0)
        cout << " nr par";
    else
        cout << " nr impar ";
    cout << endl << "8.3 ";
    int x, y;
    cout << endl << " se citesc cele doua numere x si y: ";
    cin >> x >>y;
    cout <<" Afisare bit y din x: "<< (x >> y & 1)<<endl;
    cout << "8.4.1" << endl;
    cout << " setare la valoarea 0: " << (x & (255 ^ (1 << y))) << endl;
    cout << "8.4.2" << endl;
    cout << " setare la valoarea 1: " << (x | (1 << y)) << endl;
    cout << "8.4.3"<<endl;
    cout << " se sterge bitul y: " << (x & ~(1 << y));
    cout << endl << "8.4.4" << endl;
    cout << " se complementeaza bitul y: " << (x ^ 1 << y)<<endl;
    cout << "8.5.1 "<<endl;
    int a, b;
    cout << " a = ";
    cin >> a;
    cout << " b = ";
    cin>> b;
    a = a + b;
    b = a - b;
    a = a - b;
    cout <<" "<< a << " " << b<<endl;
    cout << "8.5.2" << endl;
    a = a ^ b;
```

```

b = a ^ b;
a = a ^ b;
cout << " << a << " << b << endl;
cout << "8.6" << endl;
if (n == (1 << k))
    cout << " Este ";
else
    cout << " Nu este ";
cout << endl << "8.7" << endl;
int m, p, q, r;
cout << " se citesc numerele m, p, q, r: ";
cin >> m >> p >> q >> r;
m = m % (int)pow(2, r);
p = p % (int)pow(2, q);
p = p << r;
m = m | p;
cout << " noua valoare a lui p este: " << p;
}

```

## Phyton

```

n = int(input("n="))
k = int(input("k="))
print("8.1.1. n*8 = ", n*8)
print("8.1.2. n/4 = ", n/4)
print("8.1.3. n*10 (biti)= ", n*((1<<k)+2))
if ((n & 1) == 0)
print("8.2. Nr par")
else
print("8.2. Nr impar ")

x = int(input("x="))
y = int(input("y="))
print("8.3. Afisare bit y din x: ", x >> y & 1)
print("8.4.1. Setare la valoarea 0: ", x & (255 ^ (1 << y)))
print("8.4.2. Setare la valoarea 1: ", x | (1 << y))
print("8.4.3. Se sterge bitul y: ", x &~ (1 << y))
print("8.4.4. Se complementeaza bitul y: ", x ^ 1 << y)

a = int(input("a="))
b = int(input("b="))
print("8.5.1")
a = a + b
b = a - b
a = a - b
print(a,b)
print("8.5.2")
a = a ^ b
b = a ^ b
a = a ^ b

```

```
print(a,b)
print("8.6")
if (n == (1 << k))
print("este ")
else
print("nu este ")

print("8.7")
m = int(input("m="))
p = int(input("p="))
a = int(input("a="))
q = int(input("r="))
m = m % (int)pow(2, r)
p = p % (int)pow(2, q)
p = p << r
m = m | p
print(p)
```