

1. Iterativ

a. Prin impartiri repetate

```
int cmmdc(int a, int b)
{
    while (b)
    {
        int r = a % b;
        a = b;
        b = r;
    }

    return a;
}
```

Sau

```
int cmmdc(int a, int b)
{
    if (a == 0 && b == 0)
        return 0;

    if (a * b == 0)
        return a + b;

    while (b)
    {
        int r = a % b;
        a = b;
        b = r;
    }

    return a;
}
```

sau

```
int cmmdc1(int a, int b)
{
    while (b > 0)
    {
        a = a % b;
        swap(a, b);
    }

    return a;
}
```

2. Recursiv

a. Prin impartiri repetate

```
int cmmdc(int a, int b)
{
    if (a % b == 0)
        return b;
    else
        return cmmdc(b, a % b);
}
```

Sau

```
int cmmdc(int a, int b)
{
    if (a * b == 0)
        return a + b;
    if (a > b)
        return cmmdc(a % b, b);
    else
        return cmmdc(a, b % a);
}
```

Sau

```
void cmmdcRec(int &a, int &b)
{
    int r;
    if (b > 0)
        cmmdcRec(b, r = a % b);
}
```