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Receiving

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Understanding dynamic arrays

```cpp
#include <iostream>
using namespace std;
int main()
{
    int arraySize;
    cout<<"Enter array size:";
    cin>>arraySize;
    int *dynamicArray;
    dynamicArray= new int[arraySize];
    for(int i=0; i<arraySize; i++)
    {
        dynamicArray[i]=i+1;
    }
    cout<<endl;
    for(int i=0; i<arraySize; i++)
    {
        if(i<arraySize-1)
        {
            cout<<dynamicArray[i]<<" - ";
        }
        else cout<<dynamicArray[i];

    }
    cout<<endl;
    delete dynamicArray;
    return 0;
}

```

```
Enter array size:5

1 - 2 - 3 - 4 - 5

Process returned 0 (0x0)   execution time : 0.653 s
Press any key to continue.
```

Make a dynamic array and show the ASCII value as well.

```cpp
#include <iostream>
using namespace std;
/*
This example is showing you how to dynamically grow an array during run time.
It uses pointers to create the array.
*/

int main(){
    int ARRAYSIZE = 0;                                  //the ARRAYSIZE is how many numbers the user wants to input. This might change if the user wishes to change it!
    int x;
    char* a;                                             //a is a pointer to a character. This is going to be our main array to save characters
    char* temp;                                          //temp is a pointer to a character and is going to be a temporary array. We need it in order to be able to GROW our array.
    int  n = 0, tmpN=0;                                 //n is the counter to count the iterations. tmpN is a number we read from the user in order to see if they need to input more numbers than the initial decision.

    //---- Read into the array
    cout<<"How many numbers would you like to enter?: "; //ask the user and create an array according to the user's demand.
    cin>>ARRAYSIZE;                                      //read the size of the array from the user
    a = new char[ARRAYSIZE];                             //dynamically create an array with the number the user gave to us.

    do{
        cout<<"Enter number "<<n+1<<" -> ";              //prompt the user to enter the numbers
        cin>>x;
        if(x >= 65 && x <= 90){
            a[n] = (char)x;                              // save the number as a character (e.g., ASCII A-Z)
            cout<<"Number saved!"<<endl;
            n++;                                         //after saving the number we have to increase the counter
        }
        else {
            cout<<"Please enter a number between 65 and 90"<<endl;
        }

        if (n >= ARRAYSIZE){                             //if the new counter is equal to the ARRAYSIZE we need to GROW THE ARRAY
            cout<<"Out of Space!!!! Would you like to enter more? Please enter how many (0 to Exit): ";
            cin>>tmpN;
            if (tmpN > 0){
                ARRAYSIZE = ARRAYSIZE + tmpN;
                temp = new char[ARRAYSIZE];
                for (int i = 0; i < n; i++){
                    temp[i] = a[i];
                }
                delete [] a;
                a = temp;
            }
        }

    } while (n < ARRAYSIZE);

    cout<<"Now printing the numbers you inputted"<<endl;

    for (int i = 0; i < n; i++){                         // only print up to n, the number of valid inputs
        cout<<a[i]<<" ("<<(int)a[i]<<")"<<endl;          // optional: print ASCII value too
    }

    delete [] a; //free the memory of a

    return 0;
}
```

```
How many numbers would you like to enter?: 2
Enter number 1 -> 68
Number saved!
Enter number 2 -> 20
Please enter a number between 65 and 90
Enter number 2 -> 80
Number saved!
Out of Space!!!! Would you like to enter more? Please enter how many (0 to Exit): 1
Enter number 3 -> 72
Number saved!
Out of Space!!!! Would you like to enter more? Please enter how many (0 to Exit): 0
Now printing the numbers you inputted
D (68)
P (80)
H (72)

Process returned 0 (0x0)   execution time : 13.390 s
Press any key to continue.
```

Make a dynamic array saving people's telephone number and name. At the end be able to search with the telephone number or name.

```cpp
using namespace std;

int main()
{
    string* name;
    string* phone;
    string ask;
    int arrsize=0;
    int i=0,ok=0;

    cout<<"Enter the number of students that you need to save: ";
    cin>>arrsize;

    name= new string[arrsize];
    phone= new string[arrsize];

    for(i=0; i<arrsize; i++){
        cout<<"Enter Student name:";
        cin>>name[i];
        cout<<"Enter phone number for "<<name[i]<<":";
        cin>>phone[i];
    }

    cout<<"You saved: "<<endl<<"----------------------------"<<endl;
    for(int i=0;i<arrsize;i++){
        cout<<name[i]<<" - "<<phone[i]<<endl;
    }


    do{
        cout<<"----------------------------"<<endl;
        cout<<"What do you want to search for:"<<endl;
        cout<<"1 for telephone number"<<endl;
        cout<<"2 for name"<<endl;
        cout<<"0 to exit"<<endl;
        cin>>ok;
        if(ok==1){
            cout<<"----------------------------"<<endl;
            cout<<"Who's telephone number do you want: "<<endl;
            cin>>ask;
            for(i=0;i<arrsize;i++){
                if(ask==name[i]){
                    cout<<"----------------------------"<<endl;
                    cout<<name[i]<<" - "<<phone[i]<<endl;
                }
            }
        }
        else if(ok==2){
            cout<<"----------------------------"<<endl;
            cout<<"What's the telephone number of the person: "<<endl;
            cin>>ask;
            for(i=0;i<arrsize;i++){
                if(ask==phone[i]){
                    cout<<"----------------------------"<<endl;
                    cout<<name[i]<<" - "<<phone[i]<<endl;
                }
            }
        }
    }while(ok>0);
```

```
Enter the number of students that you need to save: 2
Enter Student name:Tudor
Enter phone number for Tudor:0231442537
Enter Student name:Alexa
Enter phone number for Alexa:0772169527
You saved:
----------------------------
Tudor - 0231442537
Alexa - 0772169527
----------------------------
What do you want to search for:
1 for telephone number
2 for name
0 to exit
2
----------------------------
What's the telephone number of the person:
0772169527
----------------------------
Alexa - 0772169527
----------------------------
What do you want to search for:
1 for telephone number
2 for name
0 to exit
1
----------------------------
Who's telephone number do you want:
Tudor
----------------------------
Tudor - 0231442537
----------------------------
What do you want to search for:
1 for telephone number
2 for name
0 to exit
```

Write a program for a supermarket which is going to:

Take the information for the different products a supermarket sells and it will save the following information: -Brand of product -Type of product -Price -Stock Remaining -Your program must be able to search for products by name and by Type

```cpp
#include <iostream>

using namespace std;

class products{
private:
    string Brand;
    string Type;
    string Price;
    string Stock;
public:
    products(){
        Brand="Empty";
        Type="Empty";
        Price="0.00";
        Stock="0.00";
    }
    void setBrand(string b){Brand=b;}
    void setType(string t){Type=t;}
    void setPrice(string p){Price=p;}
    void setStock(string s){Stock=s;}
    string getBrand(){return Brand;}
    string getType(){return Type;}
    string getPrice(){return Price;}
    string getStock(){return Stock;}

};

int main()
{
    int ok=0;
    const int MAXPRODUCTS=3;
    products inventory[MAXPRODUCTS];
    string tBrand="", tType="", tPrice="", tStock="";
    string ask;
    int exist=0;
    for(int i=0;i<MAXPRODUCTS;i++){
        cout<<"Brand "<<i+1<<": ";
        cin>>tBrand;
        inventory[i].setBrand(tBrand);

        cout<<"Type "<<i+1<<": ";
        cin>>tType;
        inventory[i].setType(tType);

        cout<<"Price "<<i+1<<": ";
        cin>>tPrice;
        inventory[i].setPrice(tPrice);

        cout<<"Stock "<<i+1<<": ";
        cin>>tStock;
        inventory[i].setStock(tStock);
    }

    cout<<endl<<endl<<endl;
    cout<<"---------YOU HAVE SAVED THE FOLLOWING INFO ------------"<<endl;

    for(int i=0;i<MAXPRODUCTS;i++){
        cout<<inventory[i].getBrand()<<" - "<<inventory[i].getType()<<endl;
        cout<<inventory[i].getPrice()<<" - "<<inventory[i].getStock()<<endl<<endl;
    }

    cout<<"-----------------------------------------------------------"<<endl;


    do{
        cout<<"What do you want to search for:"<<endl;
        cout<<"1 for Brand"<<endl;
        cout<<"2 for Type"<<endl;
        cout<<"0 to exit"<<endl;
        cin>>ok;
        exist=0;
        if(ok==1){
            cout<<"Please enter the type, the price or the stock: ";
            cin>>ask;
            cout<<"-----------------------------------------------------------"<<endl;
            for(int i=0;i<MAXPRODUCTS;i++){
                if(ask==inventory[i].getType() || ask==inventory[i].getPrice() || ask==inventory[i].getStock()){
                    cout<<inventory[i].getBrand()<<" - "<<inventory[i].getType()<<endl;
                    cout<<inventory[i].getPrice()<<" - "<<inventory[i].getStock()<<endl;
                    cout<<"-----------------------------------------------------------"<<endl;
                    exist=1;
                }
            }
            if(exist==0){
                cout<<"This item is not stored"<<endl;
                cout<<"-----------------------------------------------------------"<<endl;
            }

        }
        else if(ok==2){
            cout<<"Please enter the brand, the price or the stock: ";
            cin>>ask;
            cout<<"-----------------------------------------------------------"<<endl;
            for(int i=0;i<MAXPRODUCTS;i++){
                if(ask==inventory[i].getBrand() || ask==inventory[i].getPrice() || ask==inventory[i].getStock()){
                    cout<<inventory[i].getBrand()<<" - "<<inventory[i].getType()<<endl;
                    cout<<inventory[i].getPrice()<<" - "<<inventory[i].getStock()<<endl;
                    cout<<"-----------------------------------------------------------"<<endl;
                    exist=1;
                }
            }
            if(exist==0){
                cout<<"This item is not stored"<<endl;
                cout<<"-----------------------------------------------------------"<<endl;
            }
        }
    }while(ok>0);


    return 0;
}
```

```
Brand 1: Delikat
Type 1: Condiment
Price 1: 5$
Stock 1: 200
Brand 2: Jakarta
Type 2: Perie
Price 2: 20$
Stock 2: 62
Brand 3: InterCola
Type 3: Soda
Price 3: 2.99$
Stock 3: 412



---------YOU HAVE SAVED THE FOLLOWING INFO ------------
Delikat - Condiment
5$ - 200

Jakarta - Perie
20$ - 62

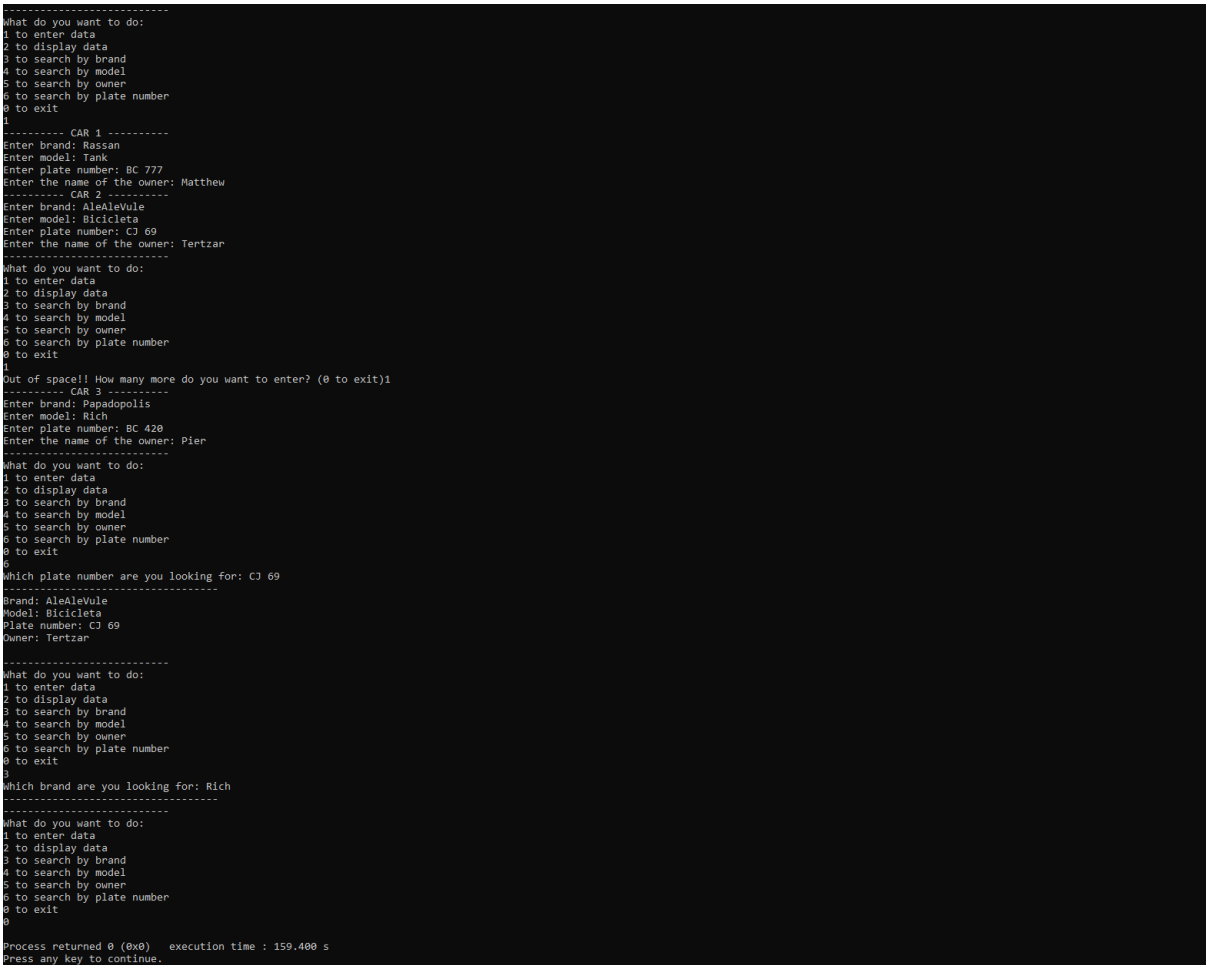
InterCola - Soda
2.99$ - 412

-------------------------------------------------------
What do you want to search for:
1 for Brand
2 for Type
0 to exit
1
Please enter the type, the price or the stock: Perie
-------------------------------------------------------
Jakarta - Perie
20$ - 62
-------------------------------------------------------
What do you want to search for:
1 for Brand
2 for Type
0 to exit
2
Please enter the brand, the price or the stock: 2.99$
-------------------------------------------------------
InterCola - Soda
2.99$ - 412
-------------------------------------------------------
What do you want to search for:
1 for Brand
2 for Type
0 to exit
0

Process returned 0 (0x0)   execution time : 146.502 s
Press any key to continue.
```

Write a program for a car dealership which is going to:

Take the information for the different cars and it will save the following information: -Plate number -Owner -Brand -Model -Your program must be able to search for cars by everything



```cpp
#include <iostream>

using namespace std;

class car
{
private:
    string brand;
    string model;
    string plateNum;
    string owner;
public:
    void setBrand(string B)
    {
        brand=B;
    }
    void setModel(string M)
    {
        model=M;
    }
    void setPlateNum(string P)
    {
        plateNum=P;
    }
    void setOwner(string O)
    {
        owner=O;
    }

    string getBrand()
    {
        return brand;
    }
    string getModel()
    {
        return model;
    }
    string getPlateNum()
    {
        return plateNum;
    }
    string getOwner()
    {
        return owner;
    }

    car()
    {
        brand="Empty";
        model="Empty";
        plateNum="Empty";
        owner="Empty";
    }
};

void enterdata(car*& specs,int& MAXCARS, int& n){
    string temp, temp2;
    int tempn;
    int* tempspecs;

//read the info from the user
    do{
            if(n>=MAXCARS){
            cout<<"Out of space!! How many more do you want to enter? (0 to exit)";
            cin>>tempn;
            if(tempn>0){
                car* newSpecs = new car[MAXCARS+tempn];

                for(int i=0;i<MAXCARS;i++){
                    newSpecs[i]=specs[i];
                }
                delete[] specs;
                specs=newSpecs;
                MAXCARS+=tempn;
            }
        }
        cout<<"---------- CAR "<<n+1<<" ----------"<<endl;

        cout<<"Enter brand: ";
        cin>>temp;
        specs[n].setBrand(temp);

        cout<<"Enter model: ";
        cin>>temp;
        specs[n].setModel(temp);

        cout<<"Enter plate number: "; // input is LSP 203
        cin>>temp>>temp2;           //the ">>" operator reads up to the white space in a sentence
        temp=temp+" "+temp2;
        specs[n].setPlateNum(temp);

        cout<<"Enter the name of the owner: ";
        cin>>temp;
        specs[n].setOwner(temp);

        n++;

    }while(n<MAXCARS);
}

void displaydata(car specs[], int MAXCARS){
cout<<endl<<endl;
    cout<<"--------- YOU HAVE SAVED ---------"<<endl<<endl;

    for(int i=0; i<MAXCARS; i++)
    {
        cout<<"Brand: "<<specs[i].getBrand()<<endl;
        cout<<"Model: "<<specs[i].getModel()<<endl;
        cout<<"Plate number: "<<specs[i].getPlateNum()<<endl;
        cout<<"Owner: "<<specs[i].getOwner()<<endl<<endl;
    }
}

void Brand(car specs[], int MAXCARS){
    string temp;
    cout<<"Which brand are you looking for: ";
    cin>>temp;
    cout<<"----------------------------------------"<<endl;
    for(int i=0;i<MAXCARS;i++){
        if(specs[i].getBrand()==temp){
            cout<<"Brand: "<<specs[i].getBrand()<<endl;
            cout<<"Model: "<<specs[i].getModel()<<endl;
            cout<<"Plate number: "<<specs[i].getPlateNum()<<endl;
            cout<<"Owner: "<<specs[i].getOwner()<<endl<<endl;
        }
    }
}

void Model(car specs[], int MAXCARS){
    string temp;
    cout<<"Which model are you looking for: ";
    cin>>temp;
    cout<<"----------------------------------------"<<endl;
    for(int i=0;i<MAXCARS;i++){
        if(specs[i].getModel()==temp){
            cout<<"Brand: "<<specs[i].getBrand()<<endl;
            cout<<"Model: "<<specs[i].getModel()<<endl;
            cout<<"Plate number: "<<specs[i].getPlateNum()<<endl;
            cout<<"Owner: "<<specs[i].getOwner()<<endl<<endl;
        }
    }
}

void Owner(car specs[], int MAXCARS){
    string temp;
    cout<<"Which owner are you looking for: ";
    cin>>temp;
    cout<<"----------------------------------------"<<endl;
    for(int i=0;i<MAXCARS;i++){
        if(specs[i].getOwner()==temp){
            cout<<"Brand: "<<specs[i].getBrand()<<endl;
            cout<<"Model: "<<specs[i].getModel()<<endl;
            cout<<"Plate number: "<<specs[i].getPlateNum()<<endl;
            cout<<"Owner: "<<specs[i].getOwner()<<endl<<endl;
        }
    }
}

void PlateNumber(car specs[], int MAXCARS){
    string temp,temp2;
    cout<<"Which plate number are you looking for: ";
    cin>>temp>>temp2;
    temp=temp+" "+temp2;
    cout<<"----------------------------------------"<<endl;
    for(int i=0;i<MAXCARS;i++){
        if(specs[i].getPlateNum()==temp){
            cout<<"Brand: "<<specs[i].getBrand()<<endl;
            cout<<"Model: "<<specs[i].getModel()<<endl;
            cout<<"Plate number: "<<specs[i].getPlateNum()<<endl;
            cout<<"Owner: "<<specs[i].getOwner()<<endl<<endl;
        }
    }
}

int main()
{
    int MAXCARS=2; // variable for maxcars
    car* specs = new car[MAXCARS];
    int ok=0,n=0;

    do{
        cout<<"--------------------------"<<endl;
        cout<<"What do you want to do:"<<endl;
        cout<<"1 to enter data"<<endl;
        cout<<"2 to display data"<<endl;
        cout<<"3 to search by brand"<<endl;
        cout<<"4 to search by model"<<endl;
        cout<<"5 to search by owner"<<endl;
        cout<<"6 to search by plate number"<<endl;
        cout<<"0 to exit"<<endl;
        cin>>ok;

        if(ok==1){
            enterdata(specs, MAXCARS, n);
        }
        else if(ok==2){
            displaydata(specs, MAXCARS);
        }
        else if(ok==3){
            Brand(specs, MAXCARS);
        }
        else if(ok==4){
            Model(specs, MAXCARS);
        }
        else if(ok==5){
            Owner(specs, MAXCARS);
        }
        else if(ok==6){
            PlateNumber(specs, MAXCARS);
        }


    }while(ok>0);


    return 0;
}
```

Understanding arguments

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

int main(int argc, char* argv[]) //argc = argument count
{
    cout<<"You have entered "<<argc<<" arguments:"<<endl;

    //Using a while loop to iterate through arguments
    int i=1;
    while(i<argc)
    {
        cout<<"Argument "<<i+1<<": "<<argv[i]<<endl;
        if (strcmp(argv[i],"/h")==0)
        {
            //write code to show help
        }
        if (strcmp(argv[i],"/s")==0)
        {
            //write code to implement /s option
        }
        if (strcmp(argv[i],"/t")==0)
        {
            //write code to implement /t option
        }
    }
    return 0;
}
```

```
You have entered 1 arguments:

Process returned 0 (0x0)   execution time : 0.040 s
Press any key to continue.
```

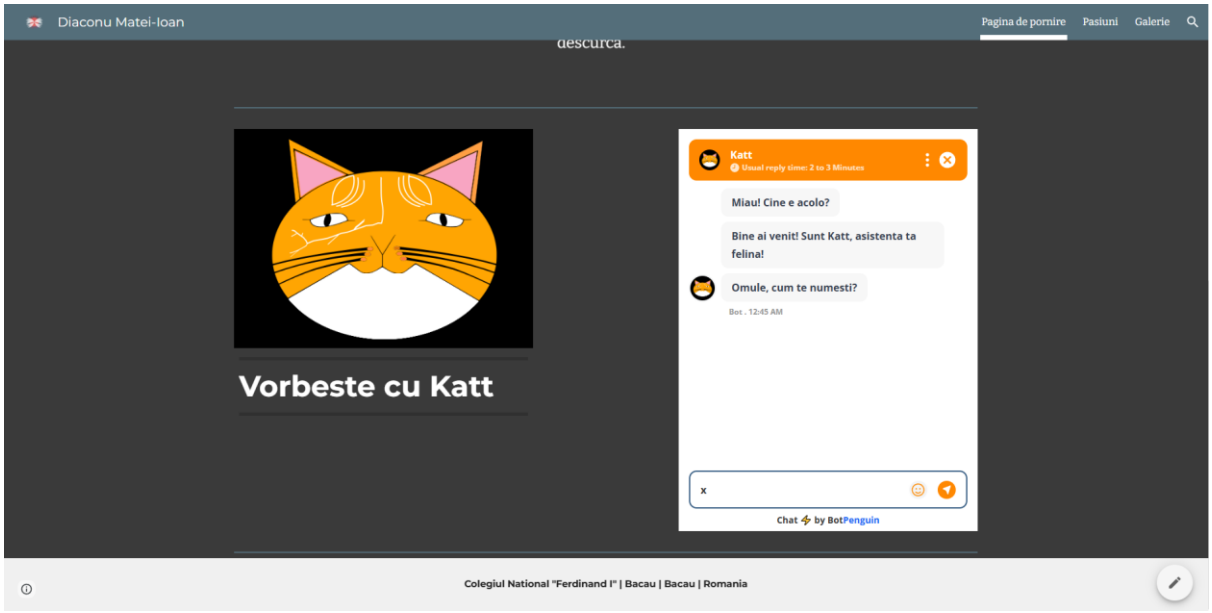
Site DIACONU MATEI IOAN

Pagina de pornire

Logo + Motto

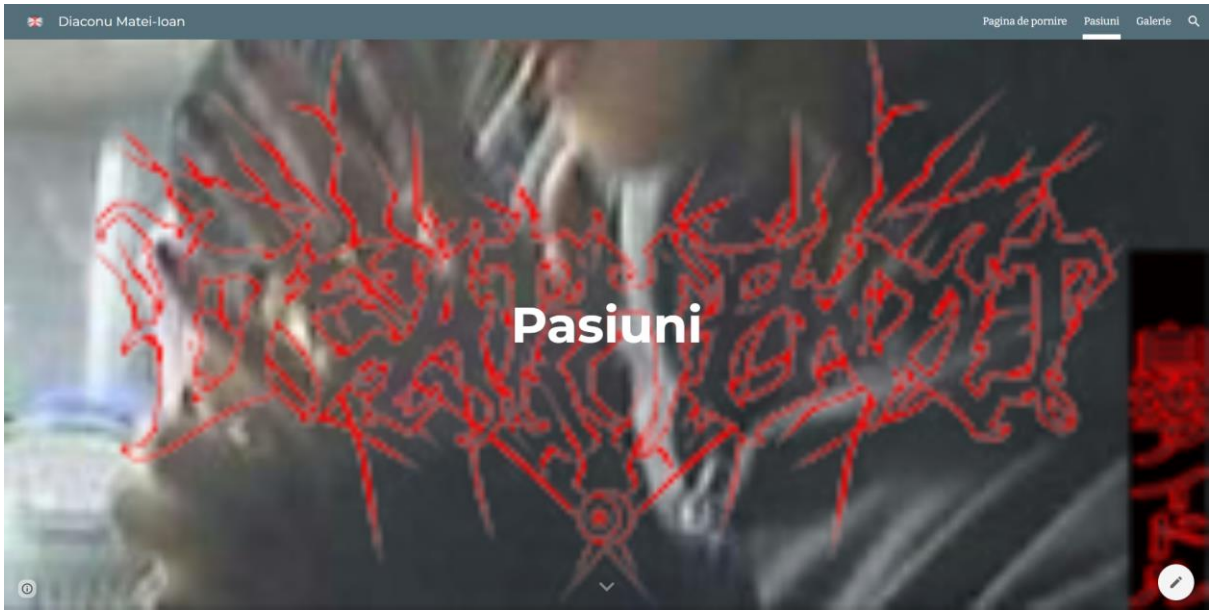


ChatBOT Katt



Pasiuni

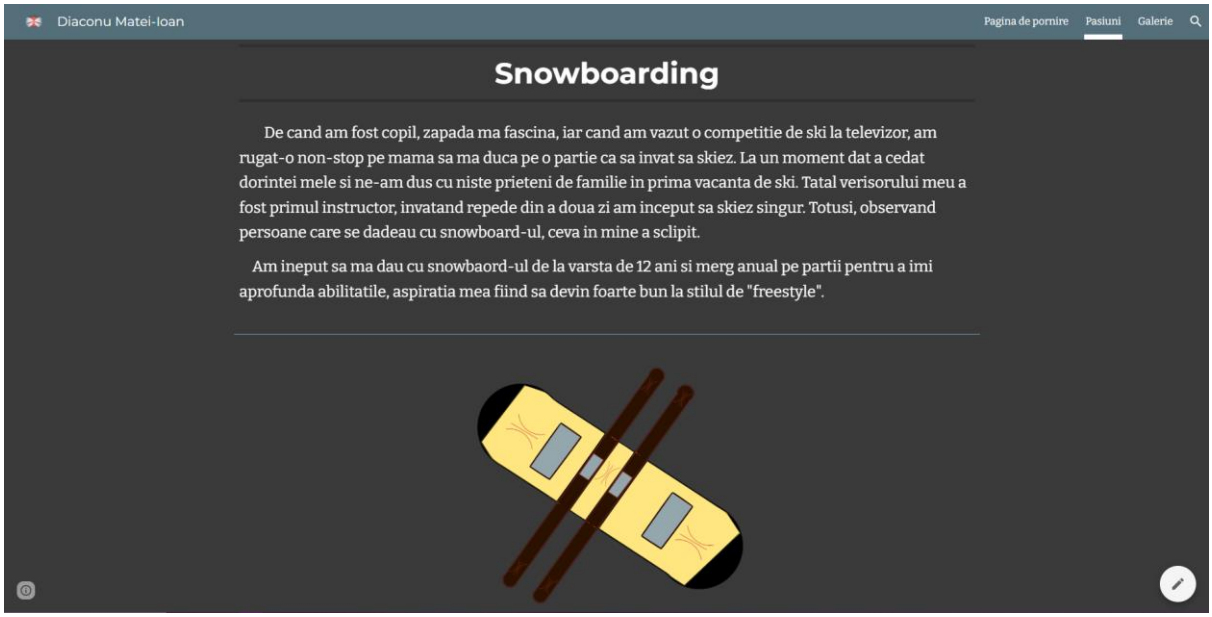
Banner



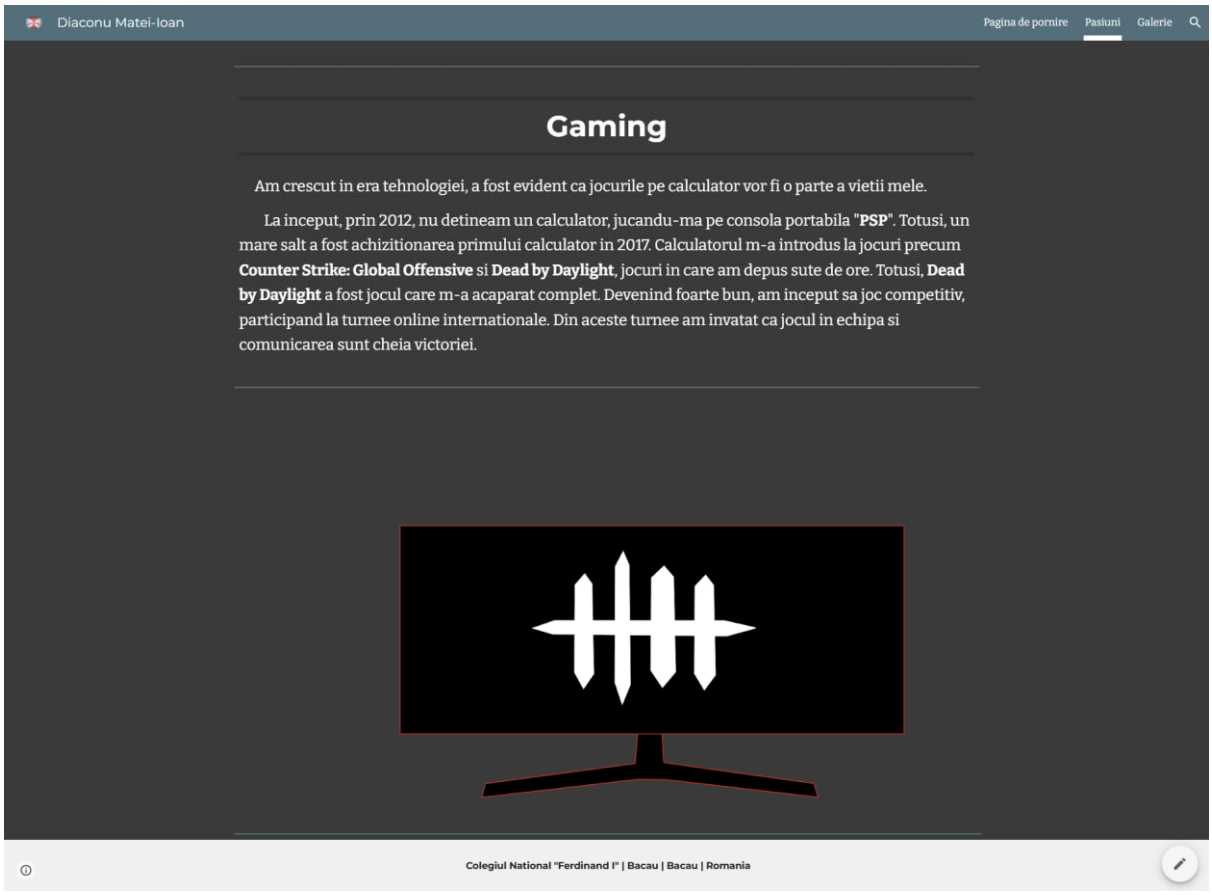
Muzica



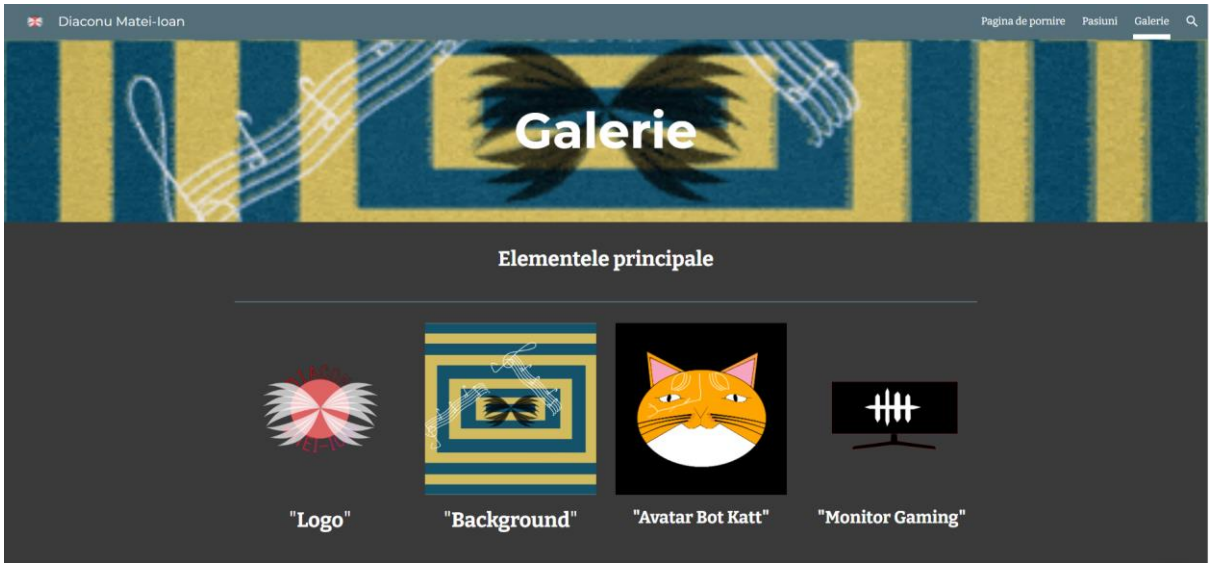
Snowboarding



Gaming

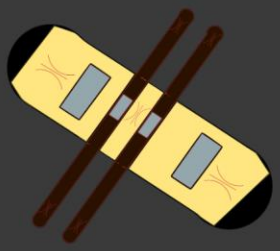


Galerie





"Tobe"



"Snowboard si Skiuri"

Elemente secundare

(Elemente care au fost folosite pentru a imbunatatii alte imagini vectoriale)



"Wings"

folosit pentru *Background* si *Logo*



"Note"

Folosit pentru *Background*

Logo Deathbolt

