2025-1-RO01-KA121-VET-000319082

4IT Erasmus+Project, 2025-1-RO01-KA121-VET-000319082

Beneficiary: "Gheorghe Vranceanu" National College, Bacau

Sending organization: "Ferdinand I" National College, Bacau

MOBILITY PORTFOLIO

Paphos, Cyprus

Mobility period 28.10.2025- 10.11.2025

Practice period: 29.10.2025-08.11.2025

RECEIVING COMPANY: LAZAROU ICT PROFESSIONALS

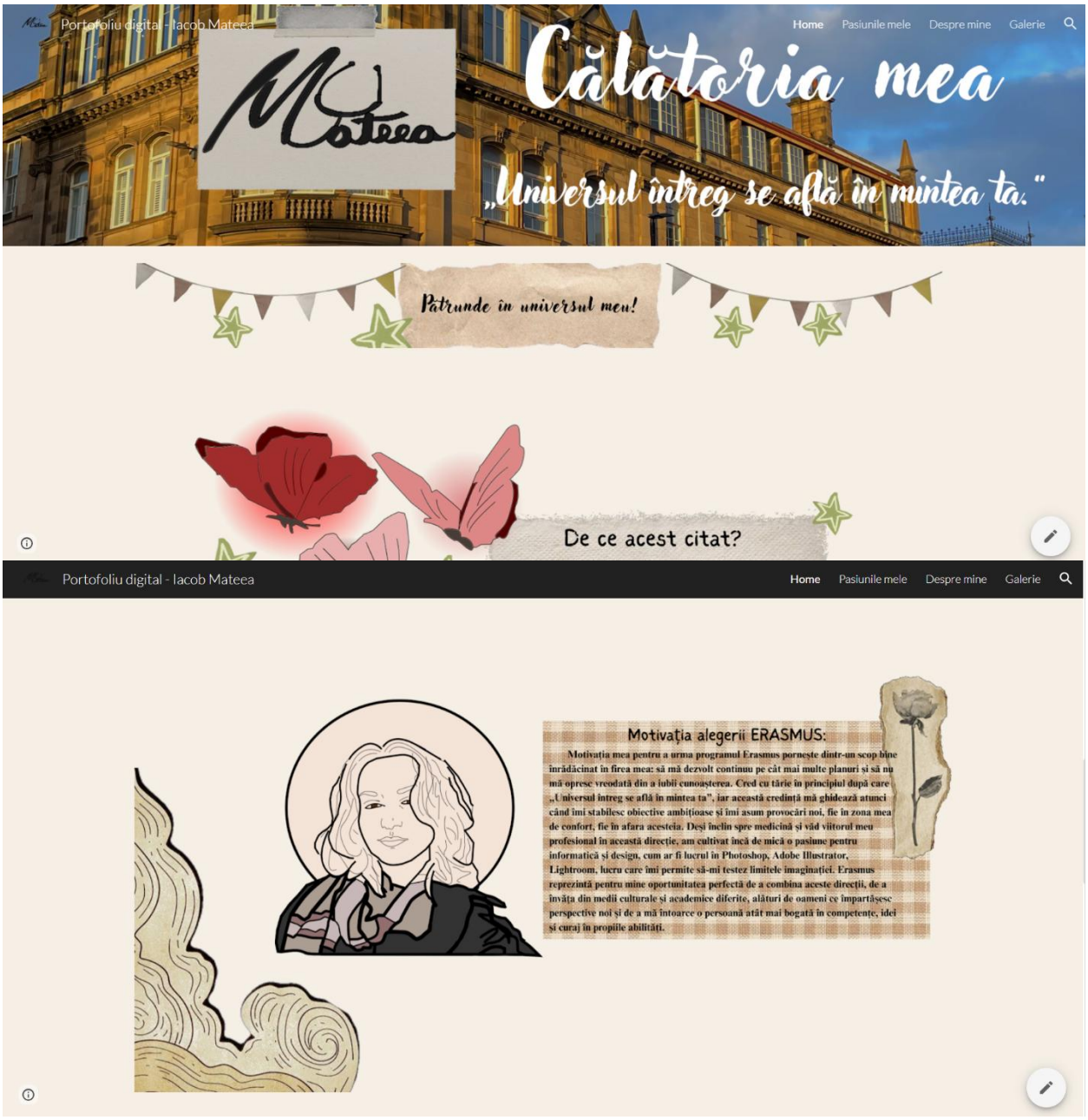
Practice tutor: Lazaros Lazarou

Participant: Iacob Mateea-Gabriela

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SECȚIUNEA 1: Site-ul realizat

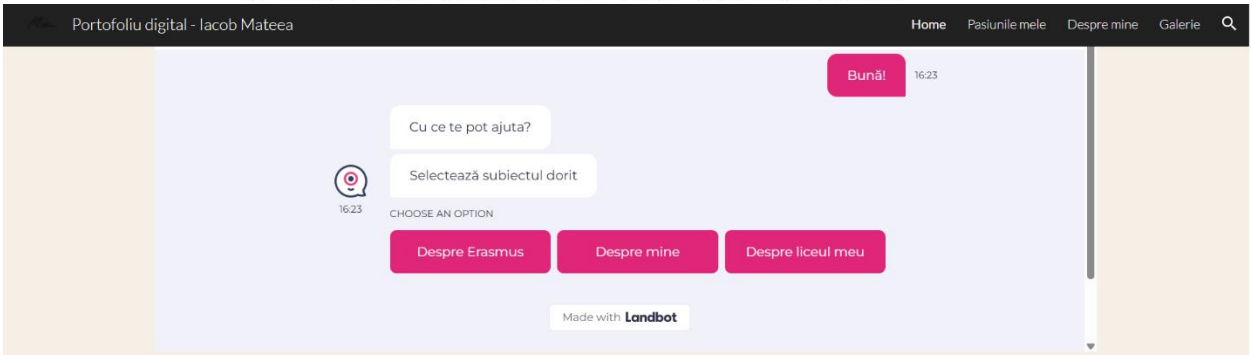


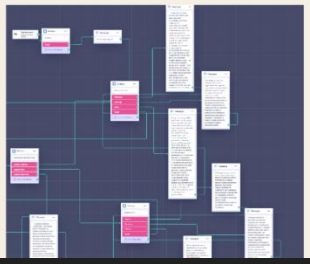
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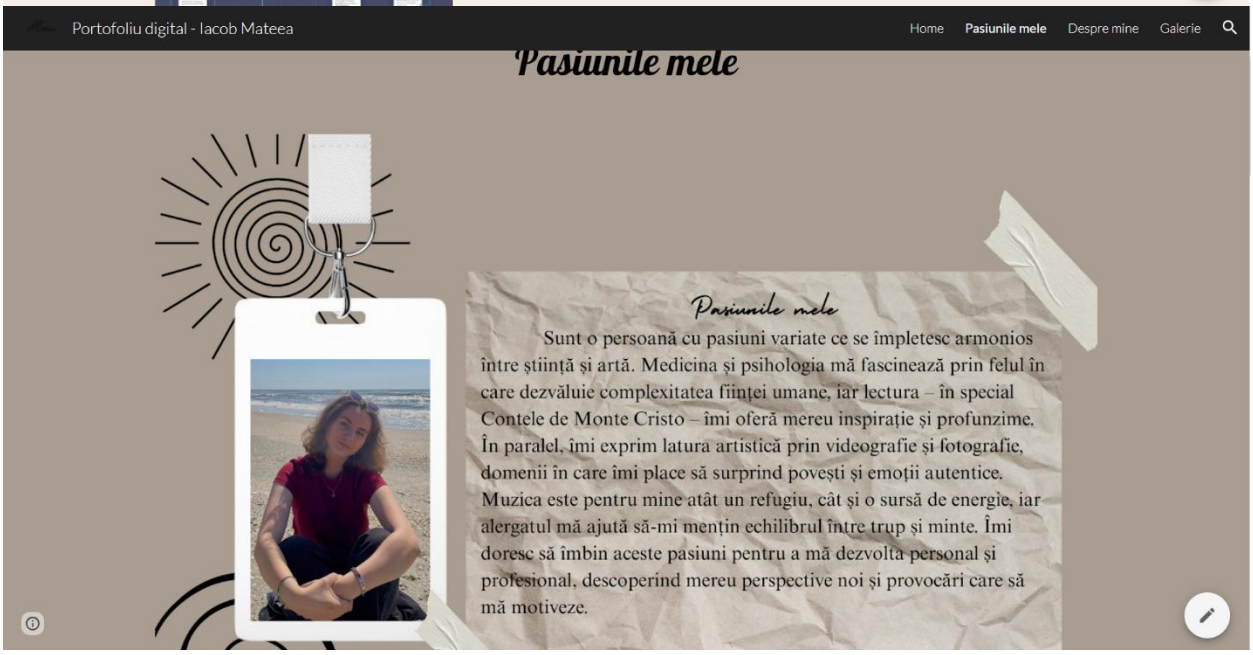
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Cum am realizat ChatBot-ul?

Am dezvoltat un chatbot cu cel puțin trei intenții principale, fiecare reprezentând un subiect cheie: Despre Erasmus, Despre mine și Despre liceul meu. Pentru fiecare intenție, am creat căi dedicate pentru a oferi informații relevante, folosind conținut preluat de pe site-ul proiectului 4IT și de pe site-ul liceului meu. Chatbot-ul este conceput astfel încât, după selectarea oricărei opțiuni, utilizatorii să poată reveni cu ușurință la meniul principal pentru a explora alte subiecte, asigurând o navigare fluentă și o experiență interactivă.

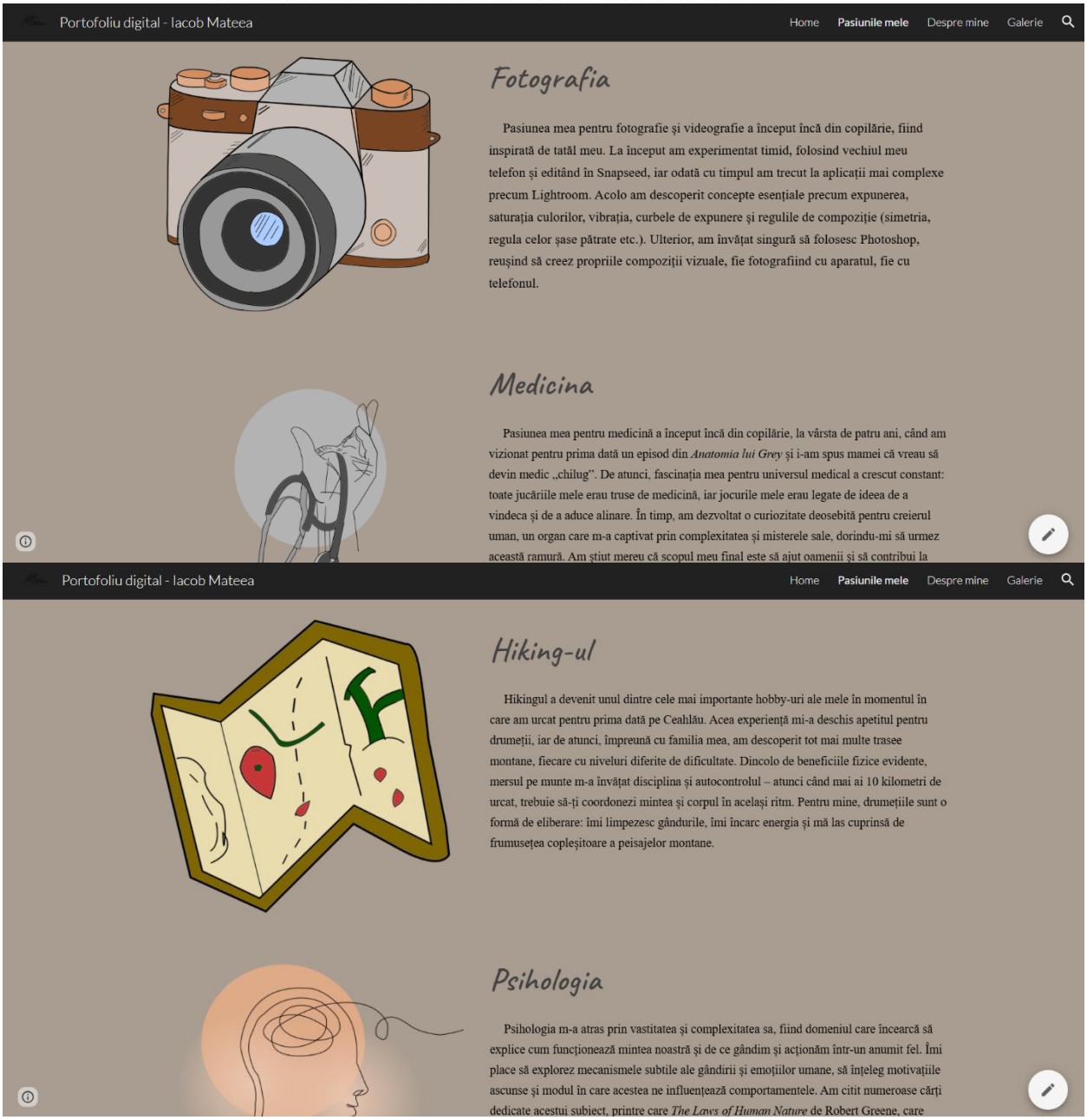


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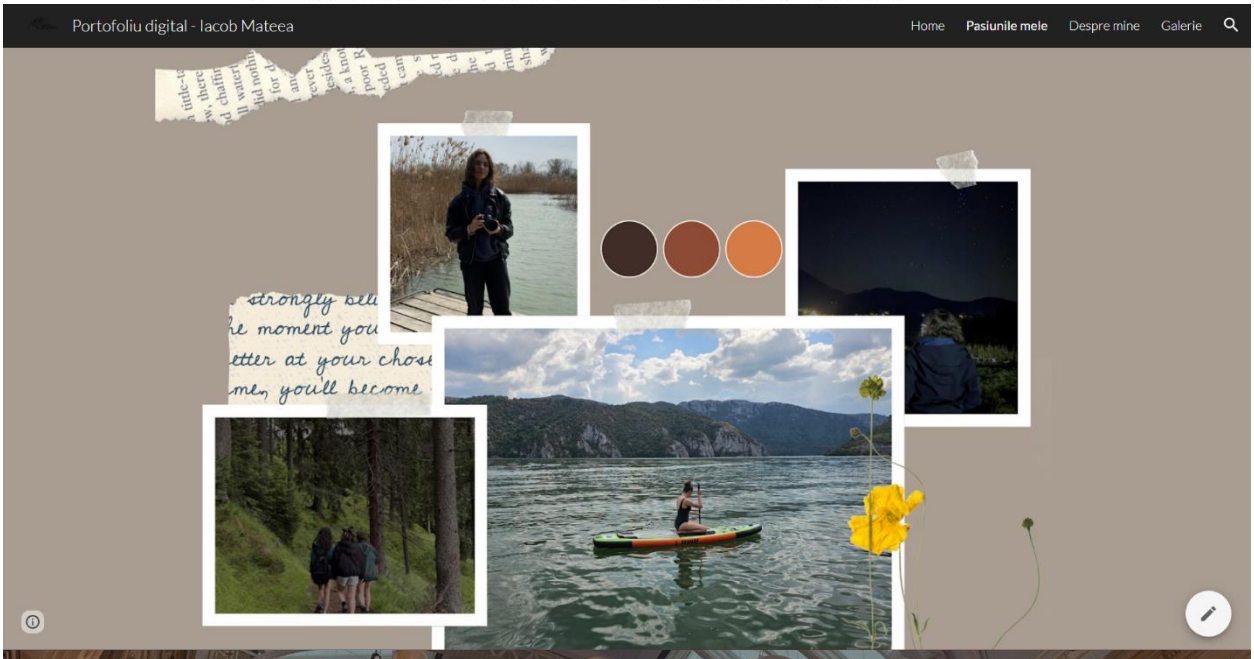
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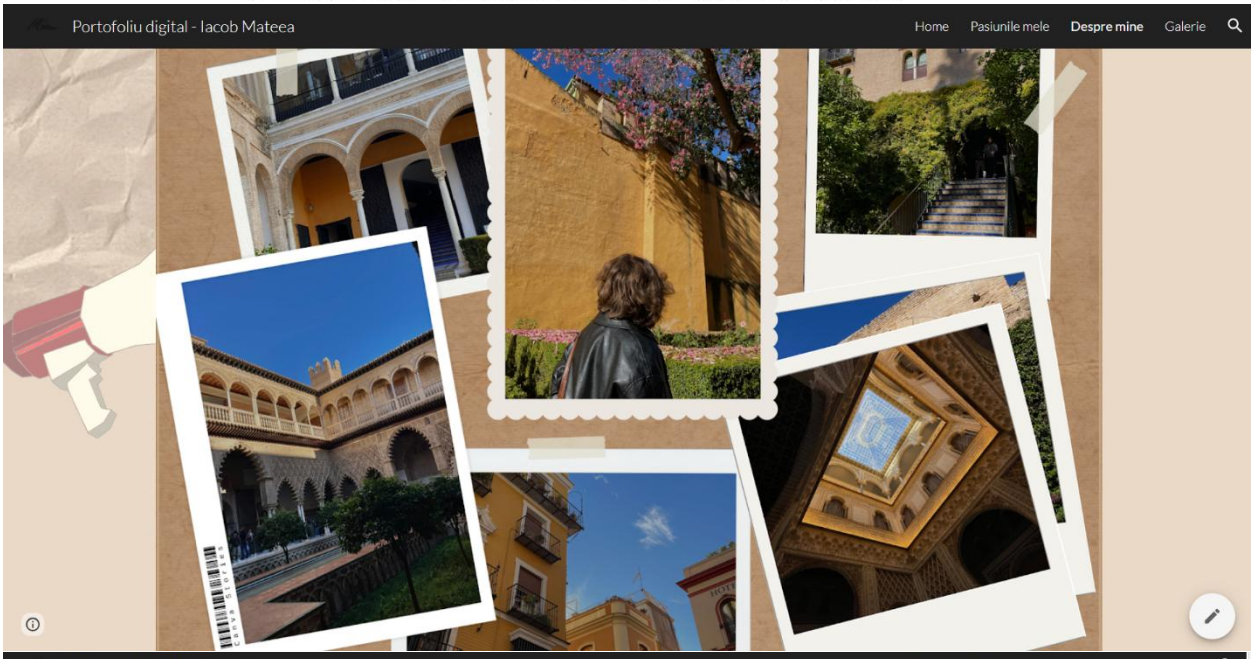


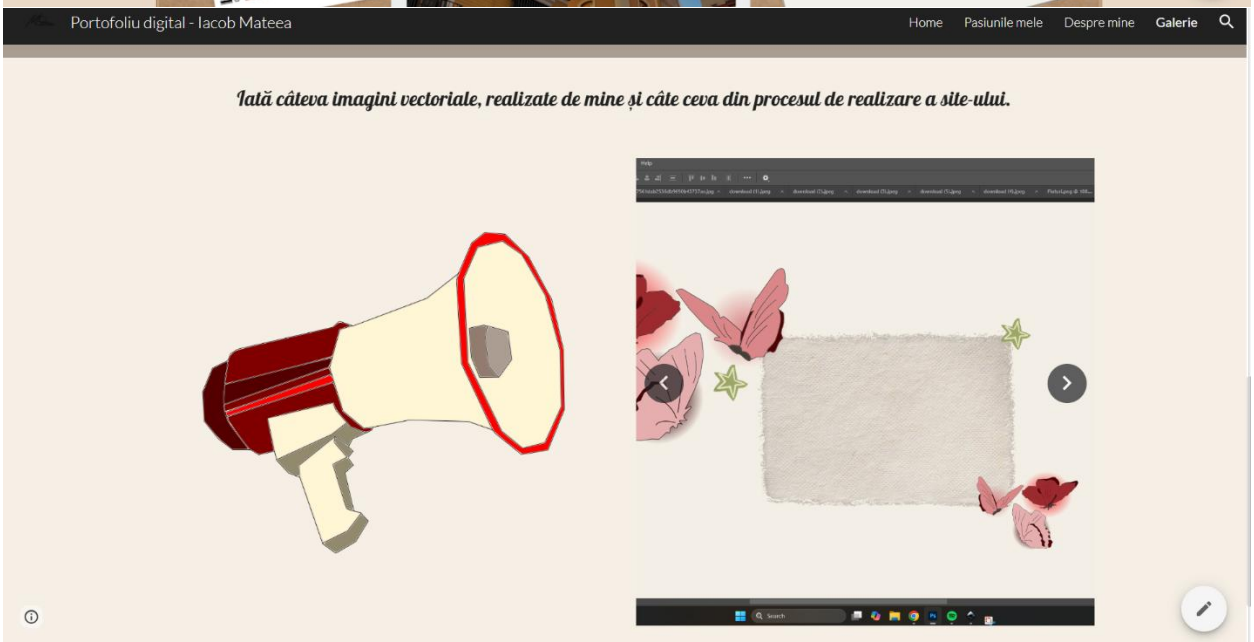
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SECȚIUNEA 2: Proiect de pregătire culturală

Hartă interactivă în Google Maps: Cipru- O aventură digitală în inima Mediteranei

Proiectul implică o hartă digitală care folosește Google Maps pentru realizarea unui jurnal de călatorie digital a unui traseu cu mai multe atracții turistice, poze și impresii.

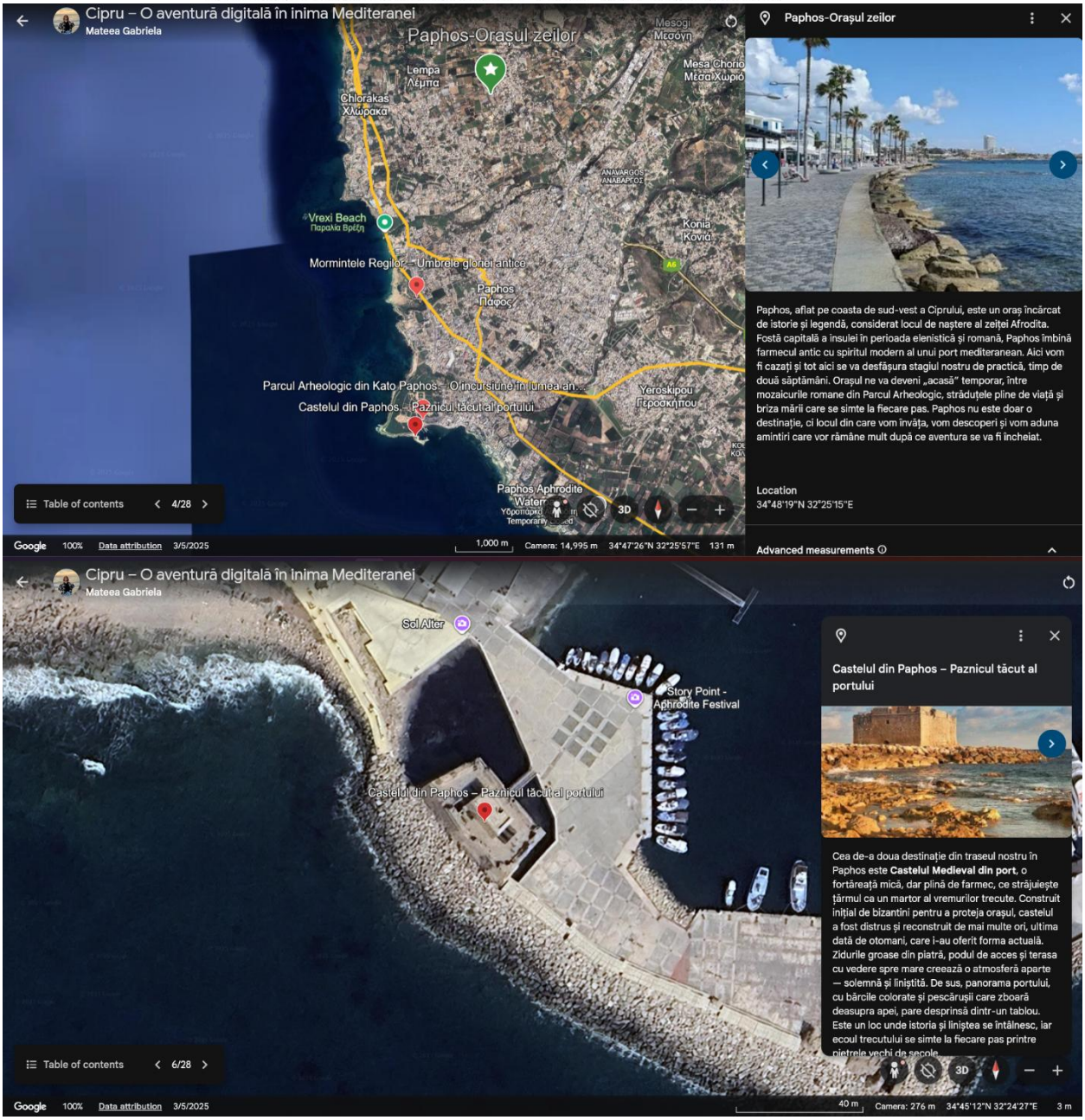


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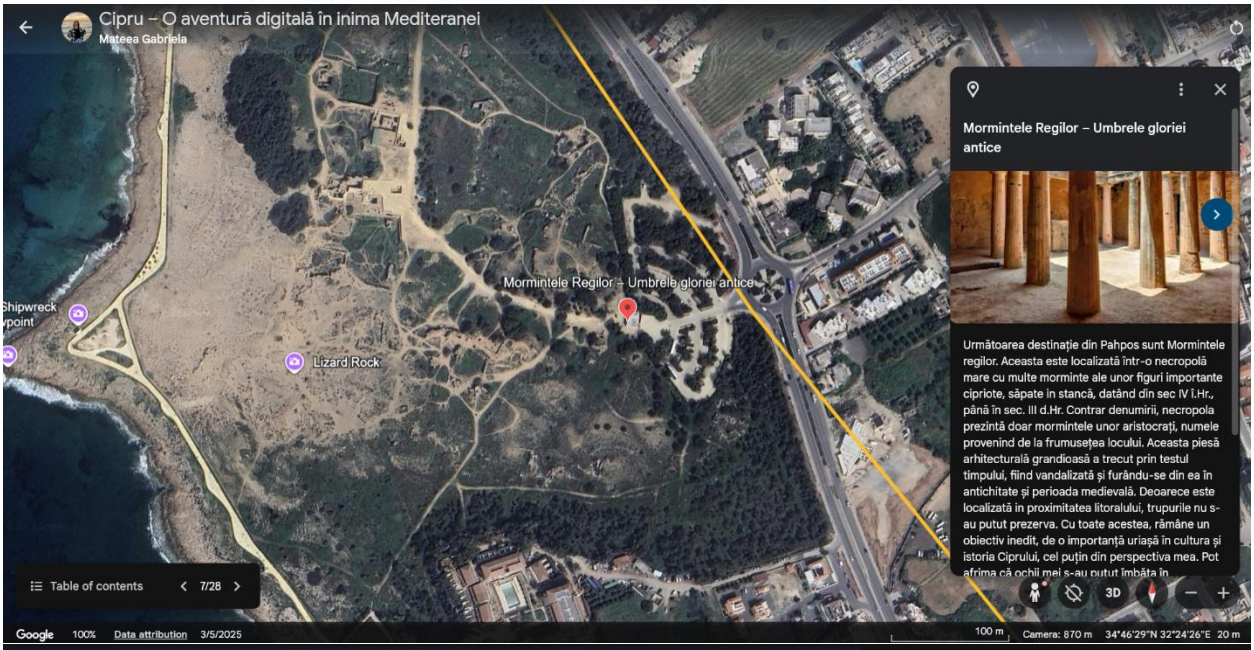


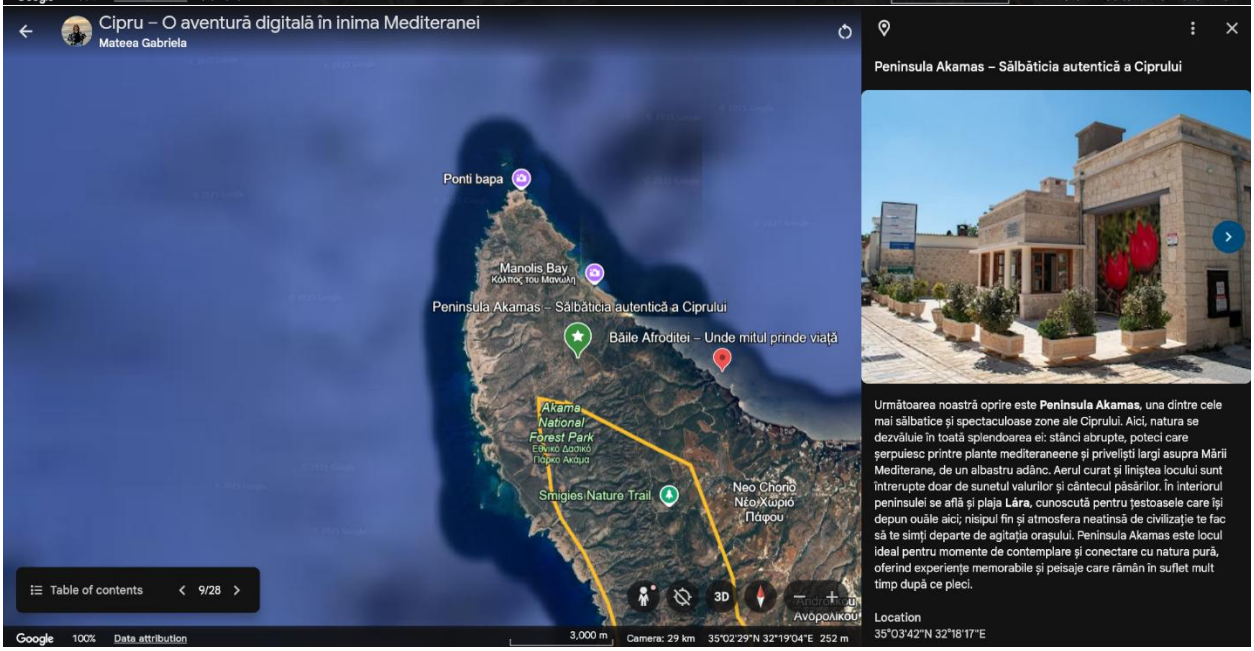
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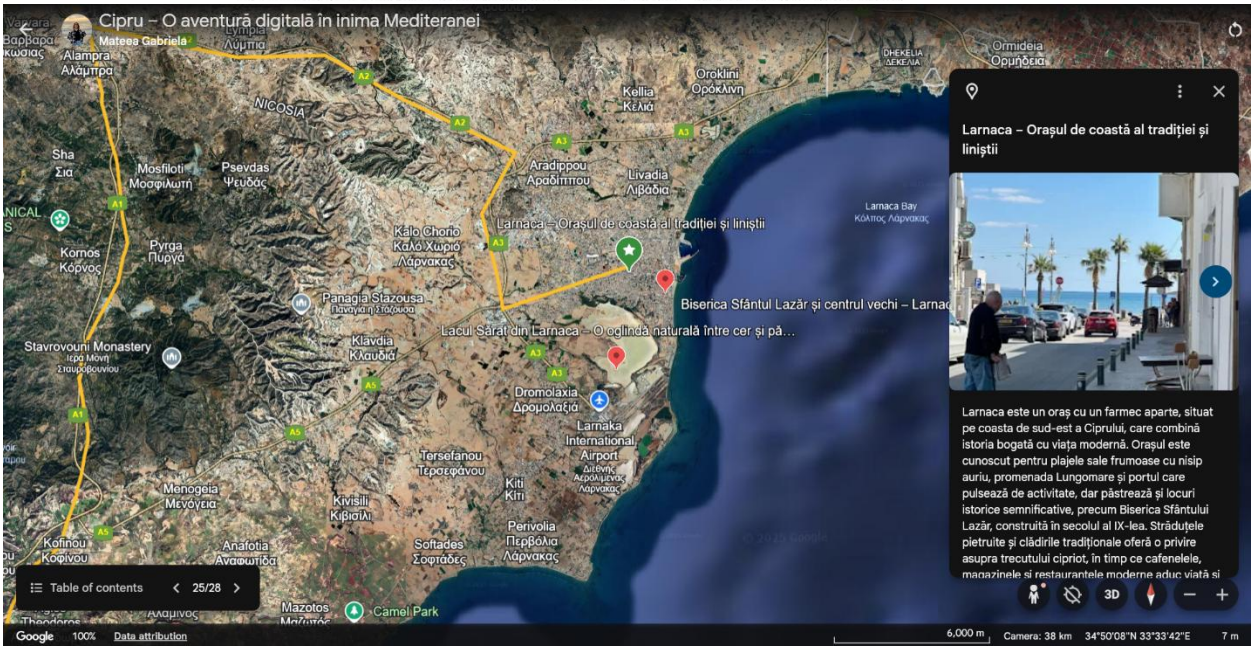


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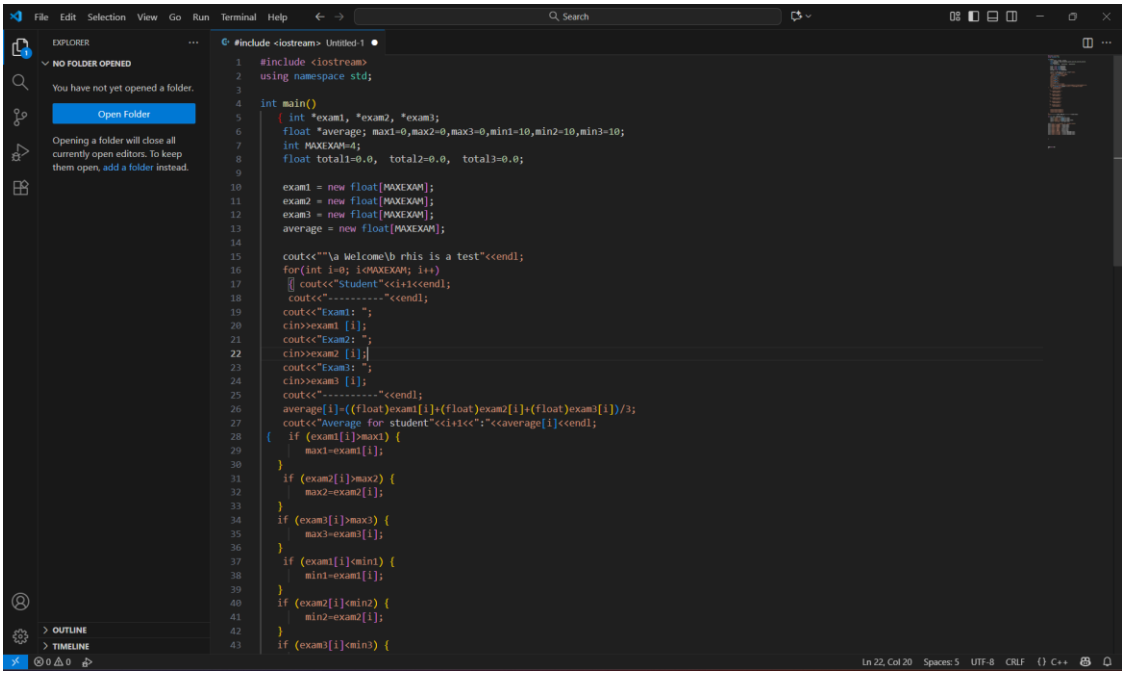
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SECȚIUNEA 3: C++

POINTERS/COMMAND LINE ARGUMENTS/ VECTORS/ARRAYS

Această secțiune conține exerciții realizate cu ajutorul limbajului C++.

Explicațiile problemelor se găsesc în capturile de ecran.

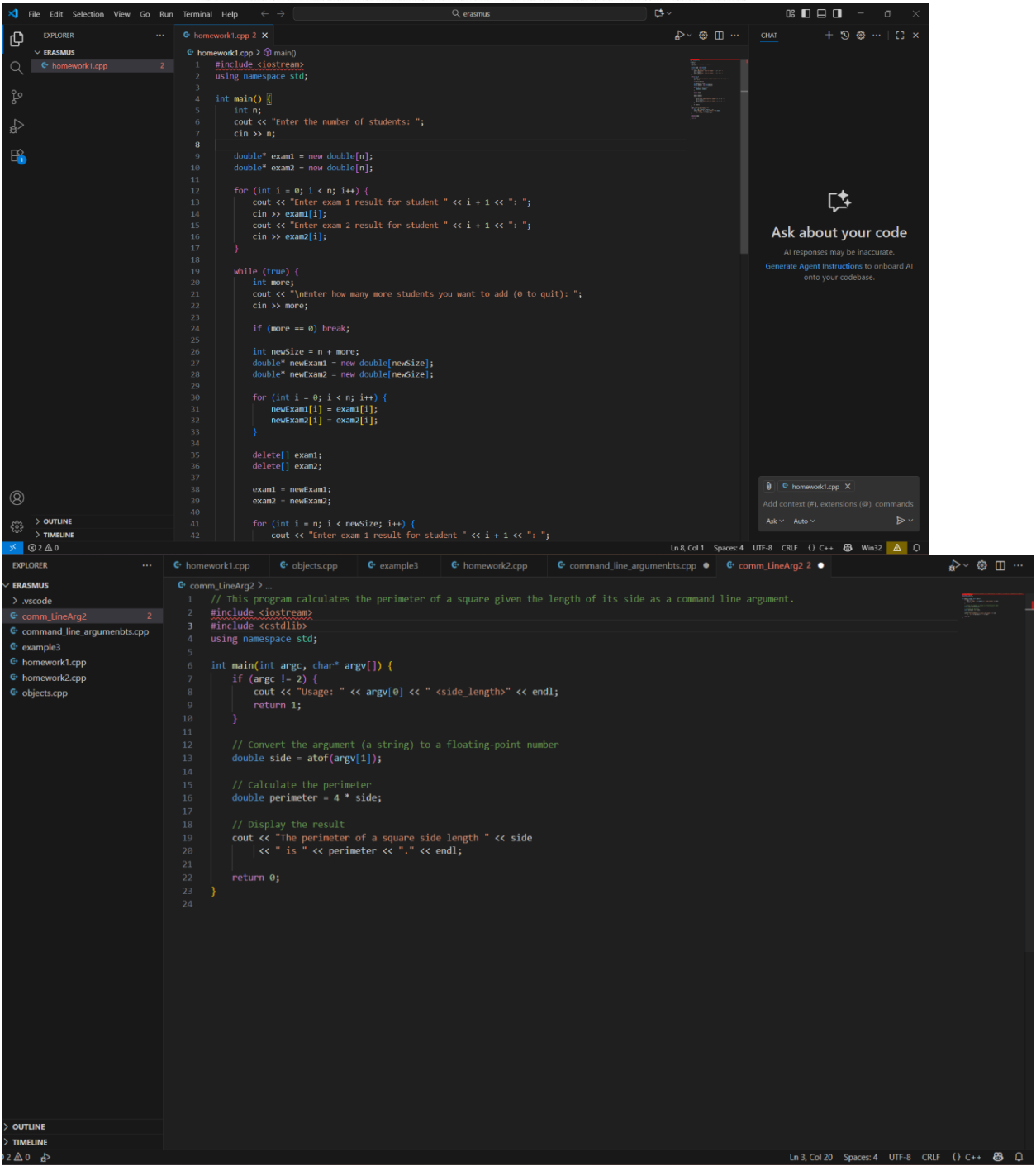


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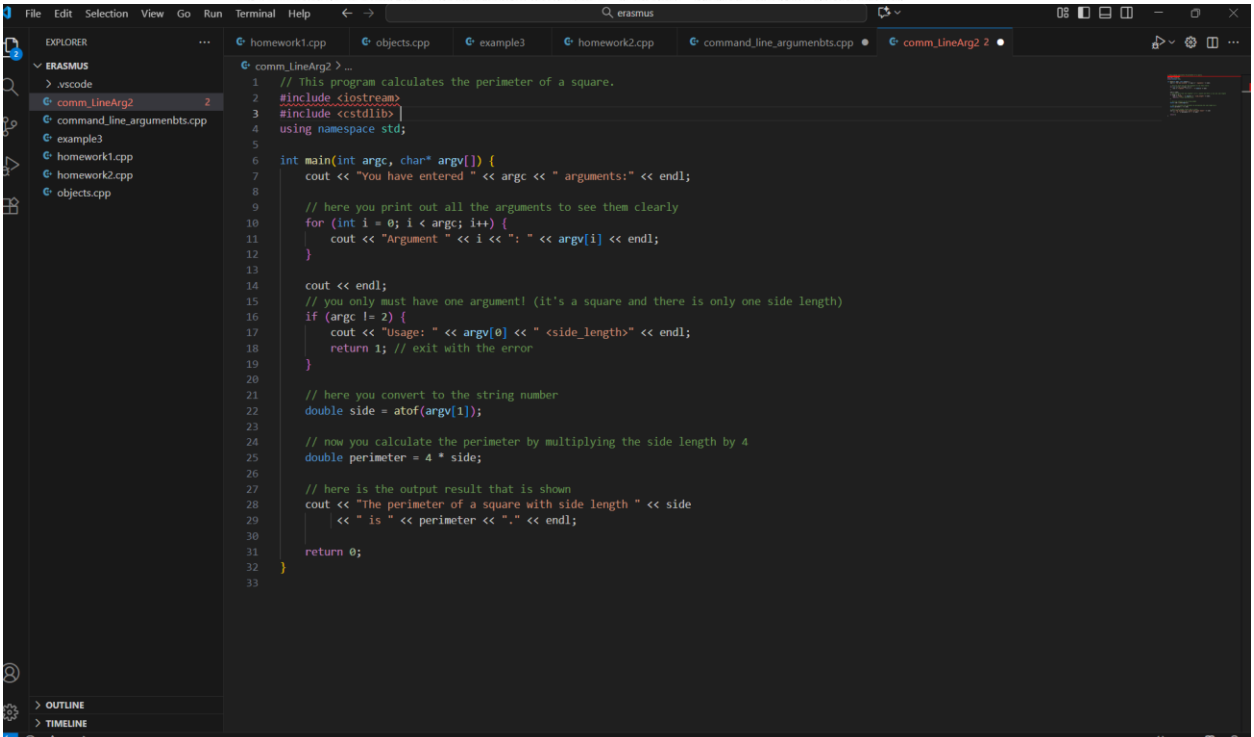


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```
// This program calculates the perimeter of a square.
#include <iostream>
#include <cstdlib>
using namespace std;

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

    // here you print out all the arguments to see them clearly
    for (int i = 0; i < argc; i++) {
        cout << "Argument " << i << ": " << argv[i] << endl;
    }

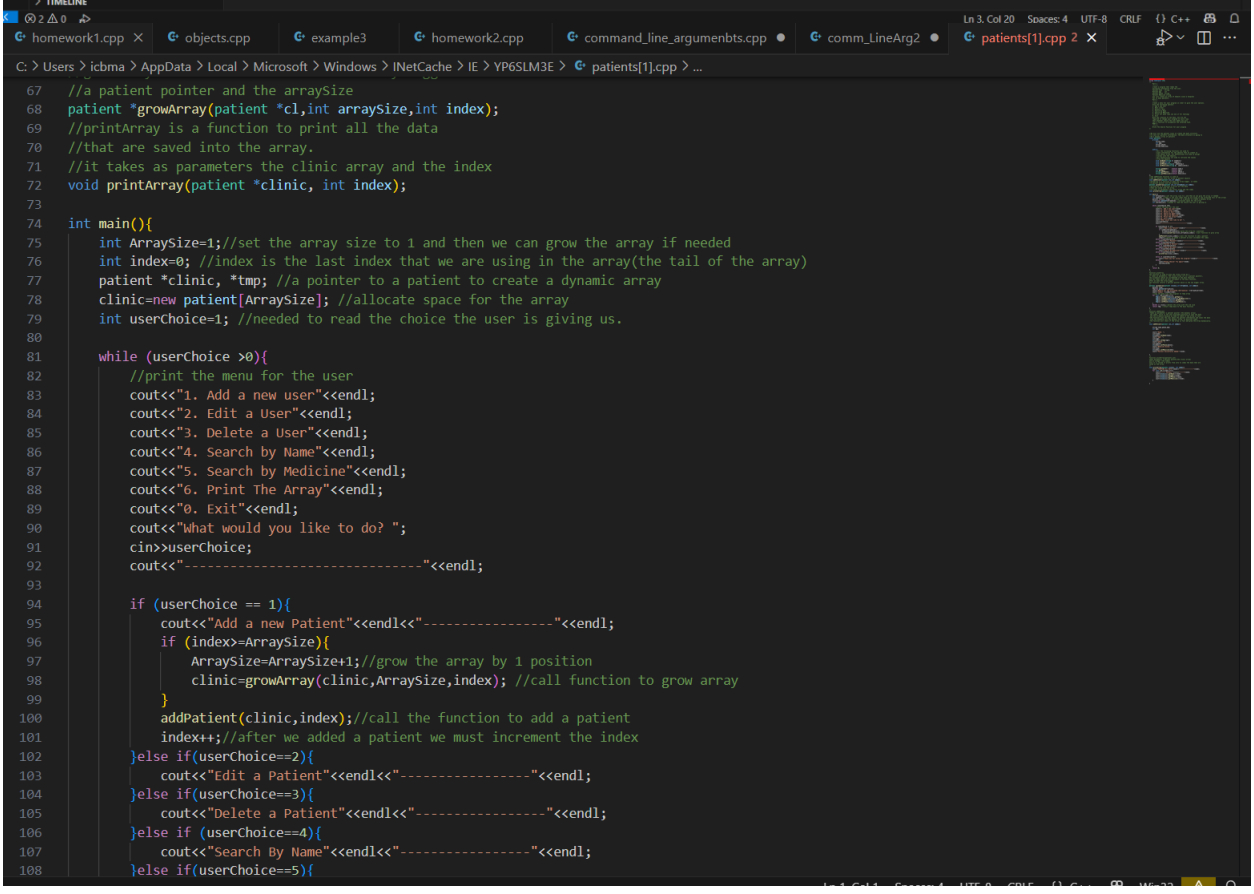
    cout << endl;
    // you only must have one argument! (it's a square and there is only one side length)
    if (argc != 2) {
        cout << "Usage: " << argv[0] << " <side_length>" << endl;
        return 1; // exit with the error
    }

    // here you convert to the string number
    double side = atof(argv[1]);

    // now you calculate the perimeter by multiplying the side length by 4
    double perimeter = 4 * side;

    // here is the output result that is shown
    cout << "The perimeter of a square with side length " << side
         << " is " << perimeter << "." << endl;

    return 0;
}
```



```
//a patient pointer and the arraySize
patient *growArray(patient *cl,int arraySize,int index);
//printArray is a function to print all the data
//that are saved into the array.
//it takes as parameters the clinic array and the index
void printArray(patient *clinic, int index);

int main(){
    int ArraySize=1;//set the array size to 1 and then we can grow the array if needed
    int index=0; //index is the last index that we are using in the array(the tail of the array)
    patient *clinic, *tmp; //a pointer to a patient to create a dynamic array
    clinic=new patient[ArraySize]; //allocate space for the array
    int userChoice=1; //needed to read the choice the user is giving us.

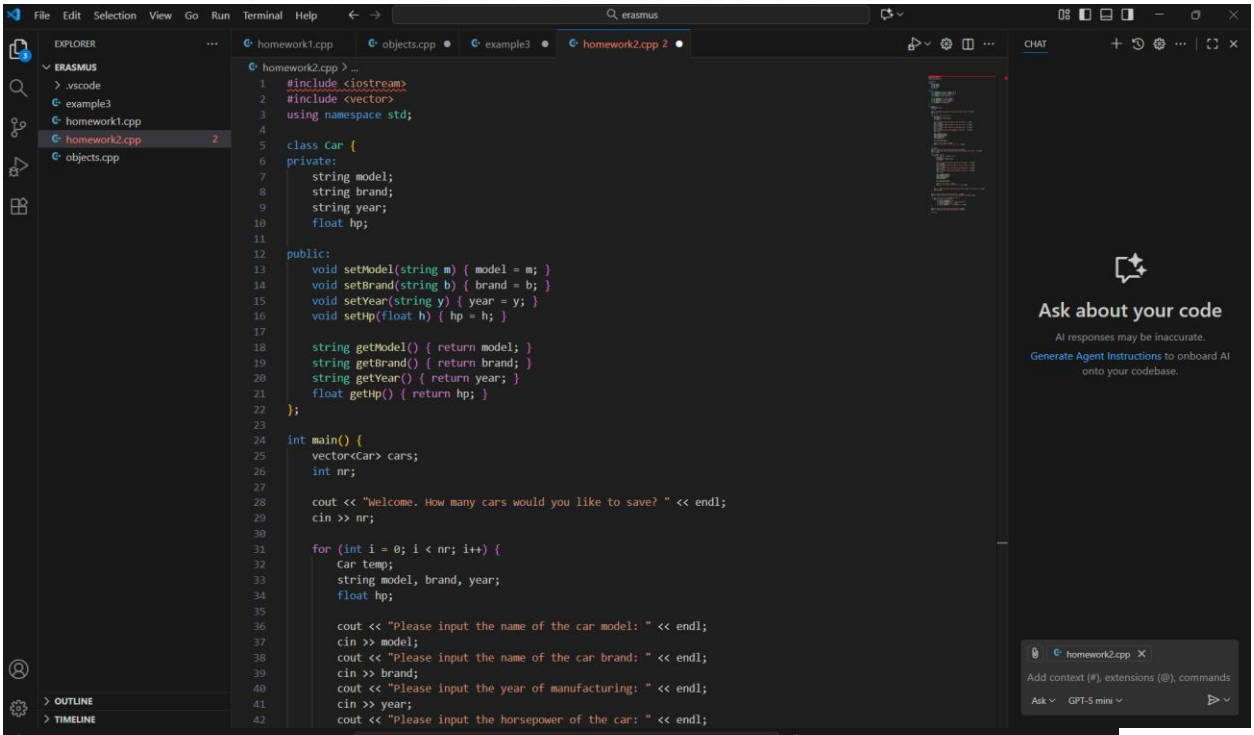
    while (userChoice >0){
        //print the menu for the user
        cout<<"1. Add a new user"<<endl;
        cout<<"2. Edit a User"<<endl;
        cout<<"3. Delete a User"<<endl;
        cout<<"4. Search by Name"<<endl;
        cout<<"5. Search by Medicine"<<endl;
        cout<<"6. Print The Array"<<endl;
        cout<<"0. Exit"<<endl;
        cout<<"What would you like to do? ";
        cin>>userChoice;
        cout<<"------------------------------"<<endl;

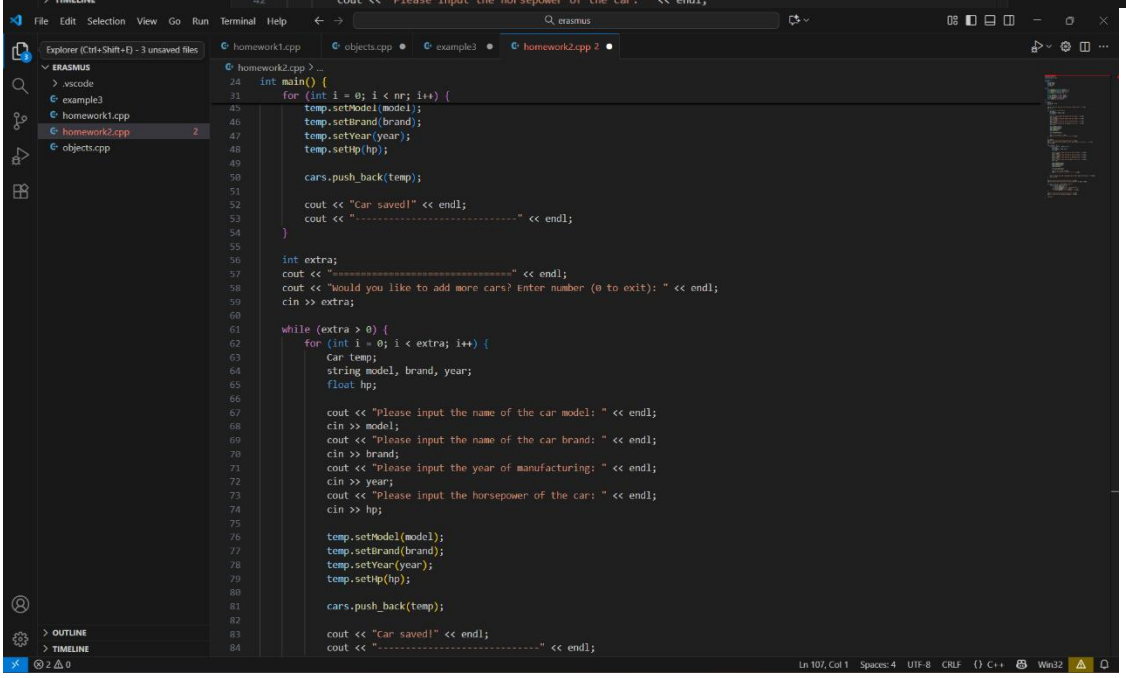
        if (userChoice == 1){
            cout<<"Add a new Patient"<<endl<<"-----------------"<<endl;
            if (index>=ArraySize){
                ArraySize=ArraySize+1;//grow the array by 1 position
                clinic=growArray(clinic,ArraySize,index); //call function to grow array
            }
            addPatient(clinic,index);//call the function to add a patient
            index++;//after we added a patient we must increment the index
        }else if(userChoice==2){
            cout<<"Edit a Patient"<<endl<<"-----------------"<<endl;
        }else if(userChoice==3){
            cout<<"Delete a Patient"<<endl<<"-----------------"<<endl;
        }else if (userChoice==4){
            cout<<"Search By Name"<<endl<<"-----------------"<<endl;
        }else if(userChoice==5){
```

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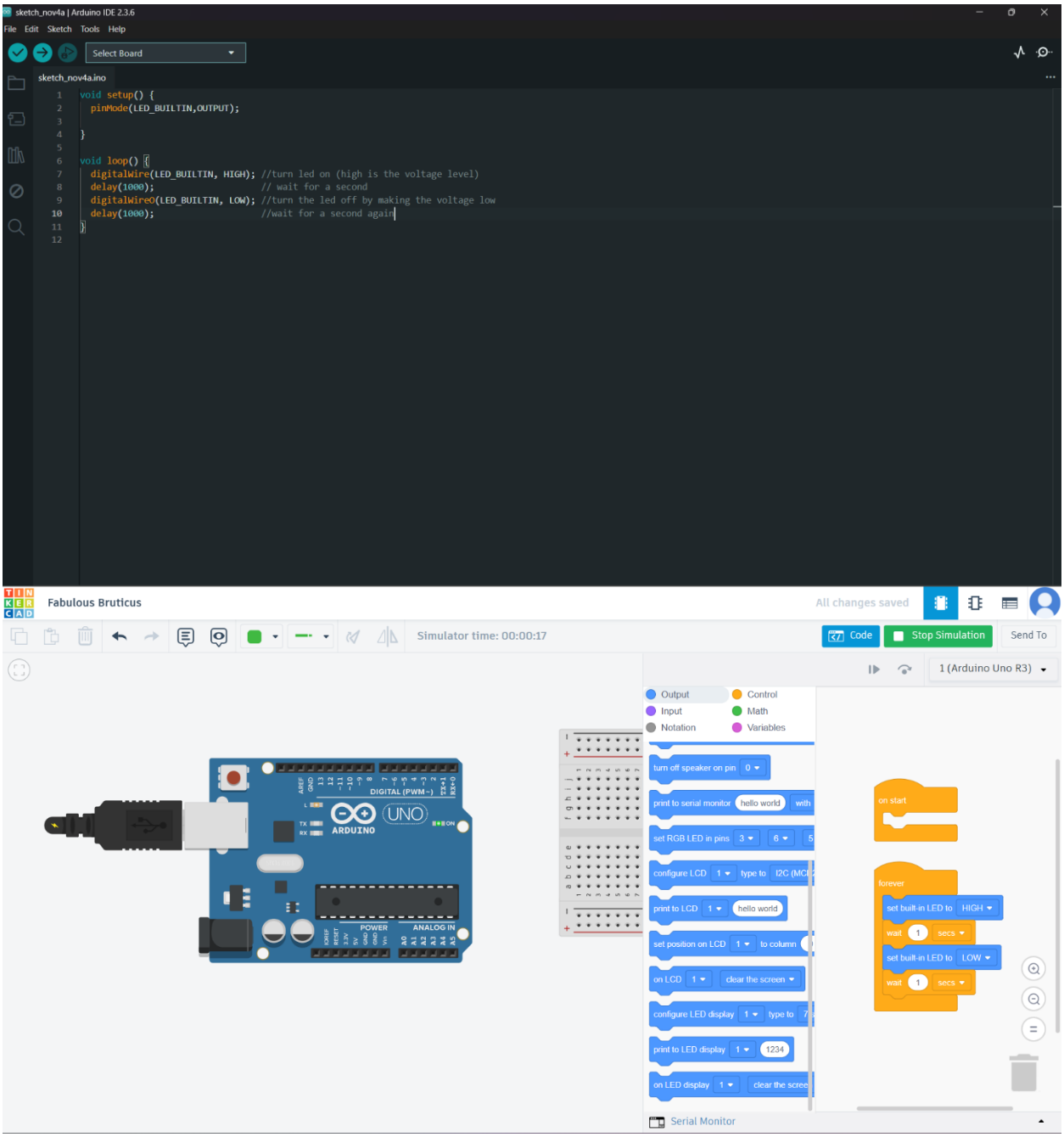
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SECȚIUNEA 4: ARDUINO

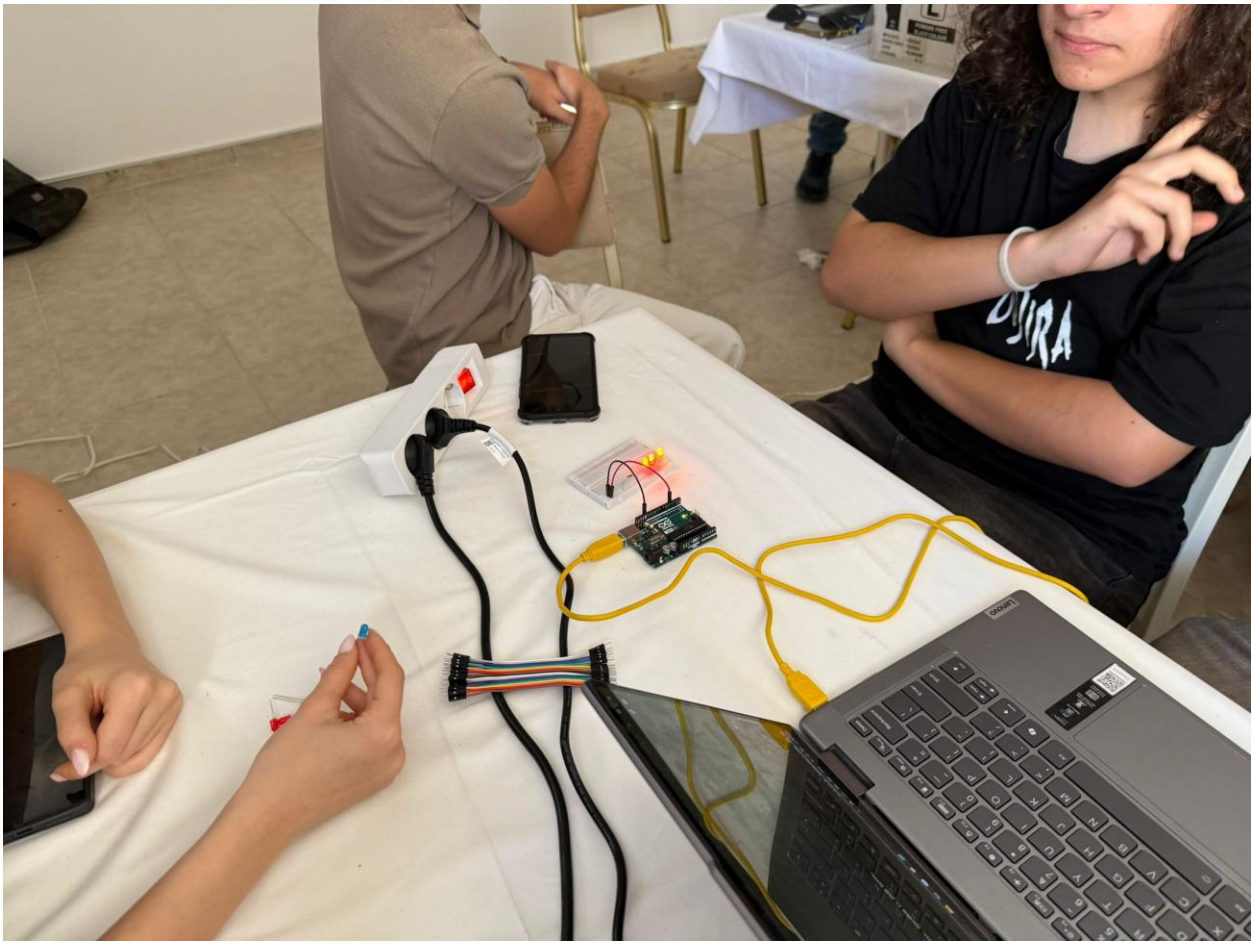
1. Conectarea unui led



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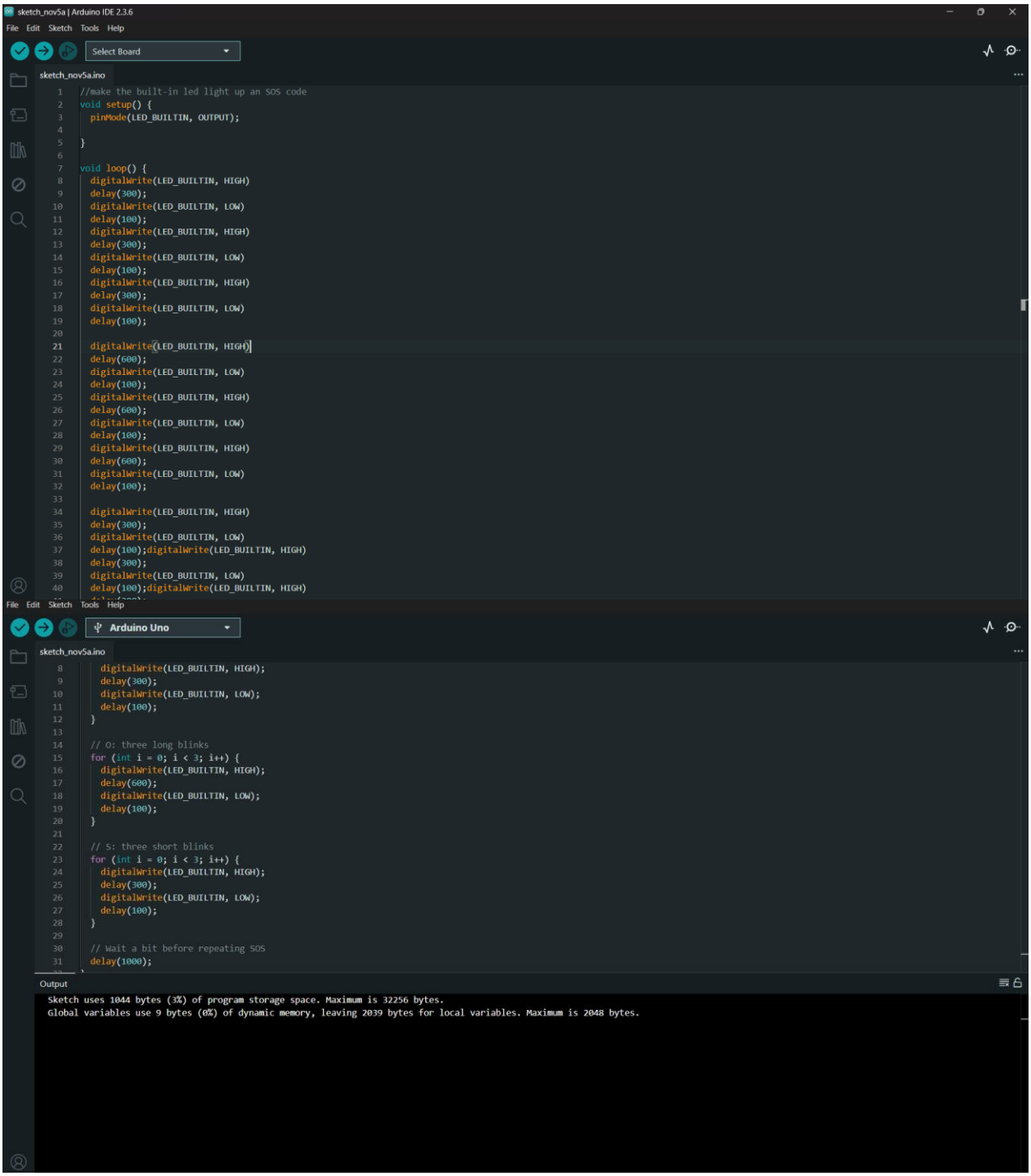
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2.Conectarea unui led în funcție de senzor de distanță



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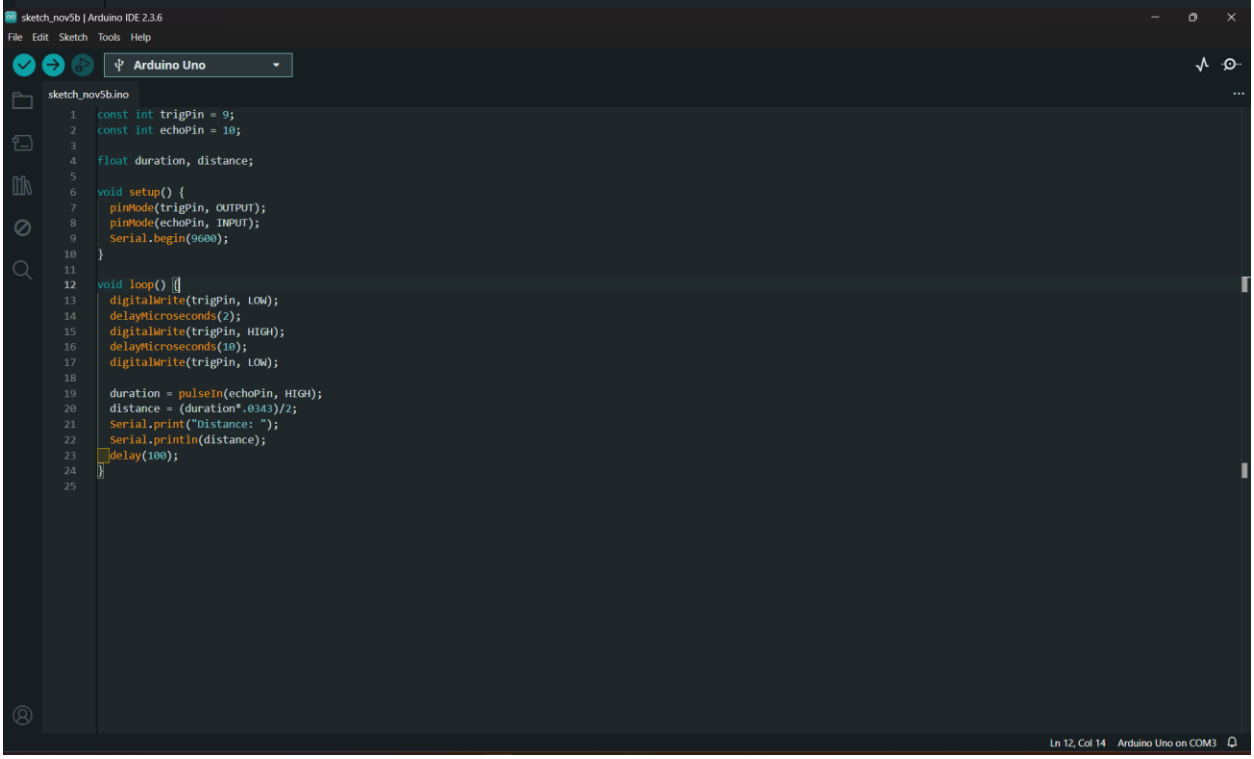
sketch_nov5b.ino

```ino
int trigger = 1;  // pinul pentru TRIGGER
int echo = 2;     // pinul pentru ECHO
void setup() {
  pinMode(trigger, OUTPUT); // pinul TRIGGER trimite semnalul (OUTPUT)
  pinMode(echo, INPUT);     // pinul ECHO primește semnalul (INPUT)

}

void loop() {
  // put your main code here, to run repeatedly:

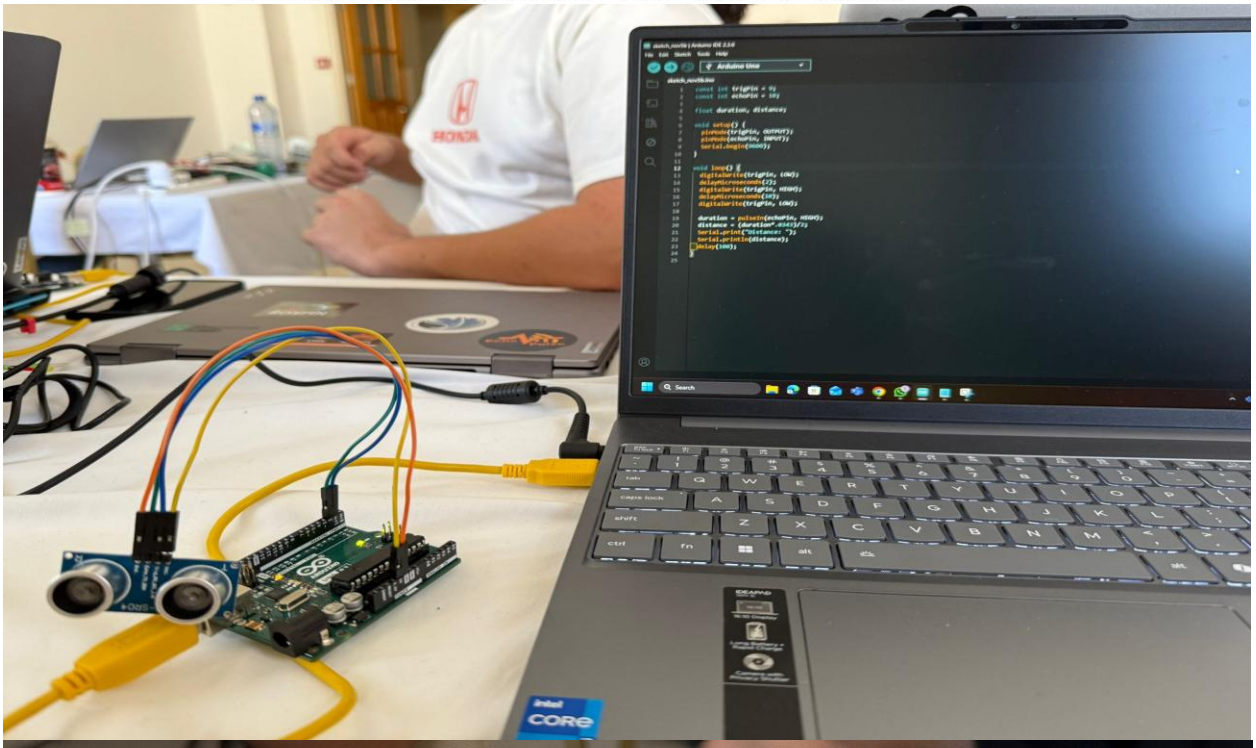
}
```

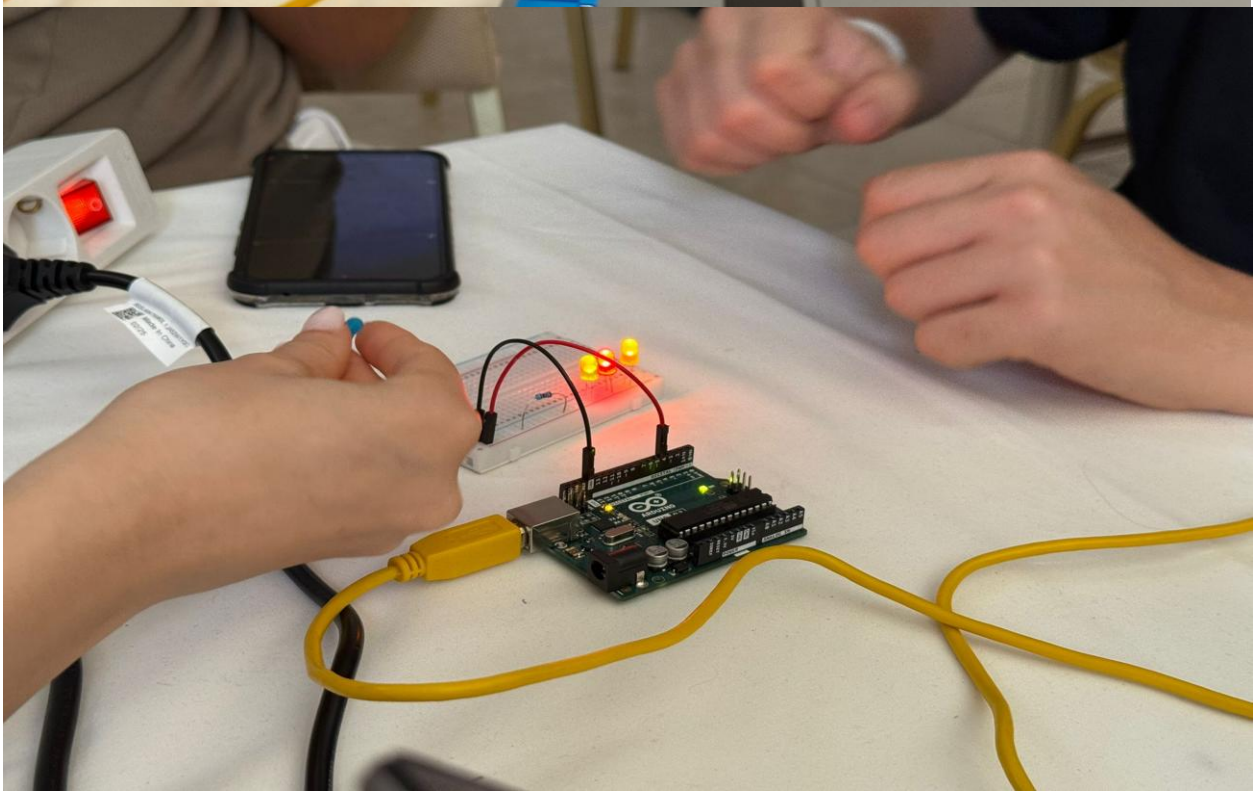


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3. Conectarea unui led în funcție de senzor de apă

```
const int trigPin = 9;
const int echoPin = 10;

float duration;
float distance;

void setup() {
  pinMode(trigPin, OUTPUT);  // Pinul care trimite impulsul ultrasonic
  pinMode(echoPin, INPUT);   // Pinul care primește ecoul
  Serial.begin(9600);        // Pornim comunicarea serială pentru a vedea rezultatele
}

void loop() {
  // Ne asigurăm că pinul de trigger e LOW la început
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);

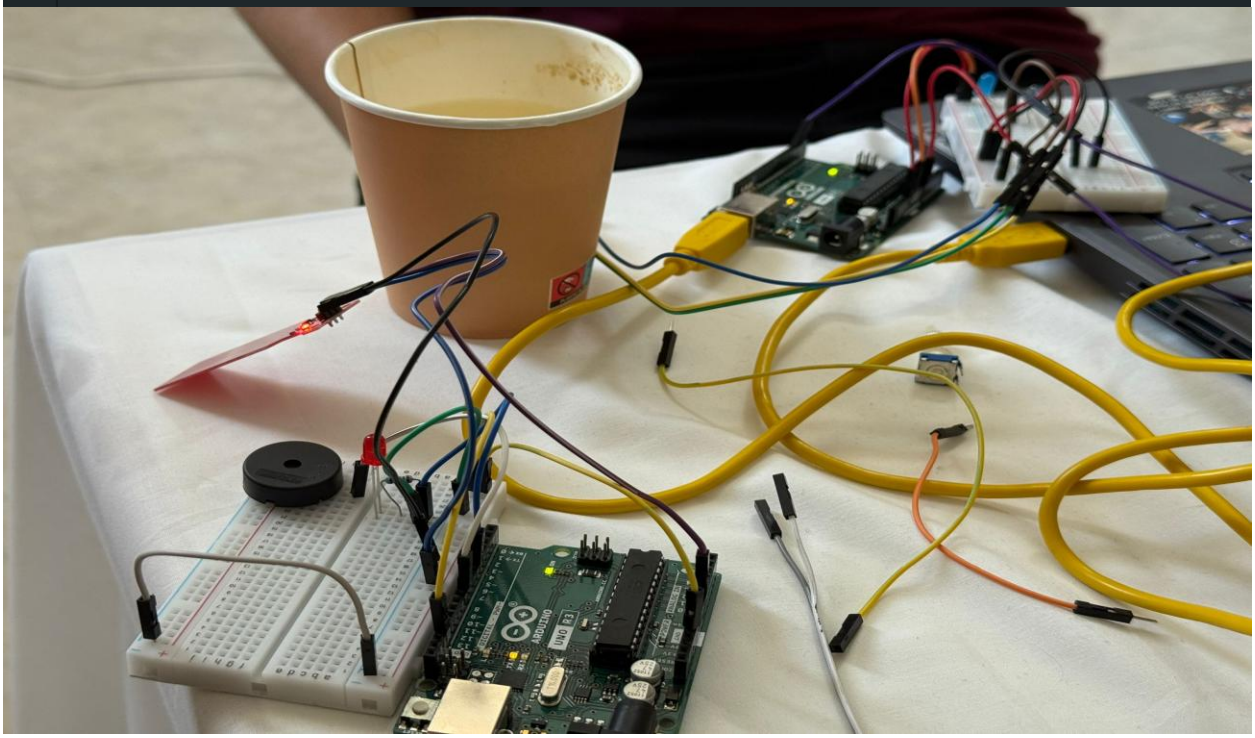
  // Trimitem un impuls de 10 microsecunde
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  // Măsurăm durata impulsului de ecou
  duration = pulseIn(echoPin, HIGH);

  // Calculăm distanța (viteza sunetului = 0.0343 cm/µs)
  distance = (duration * 0.0343) / 2;

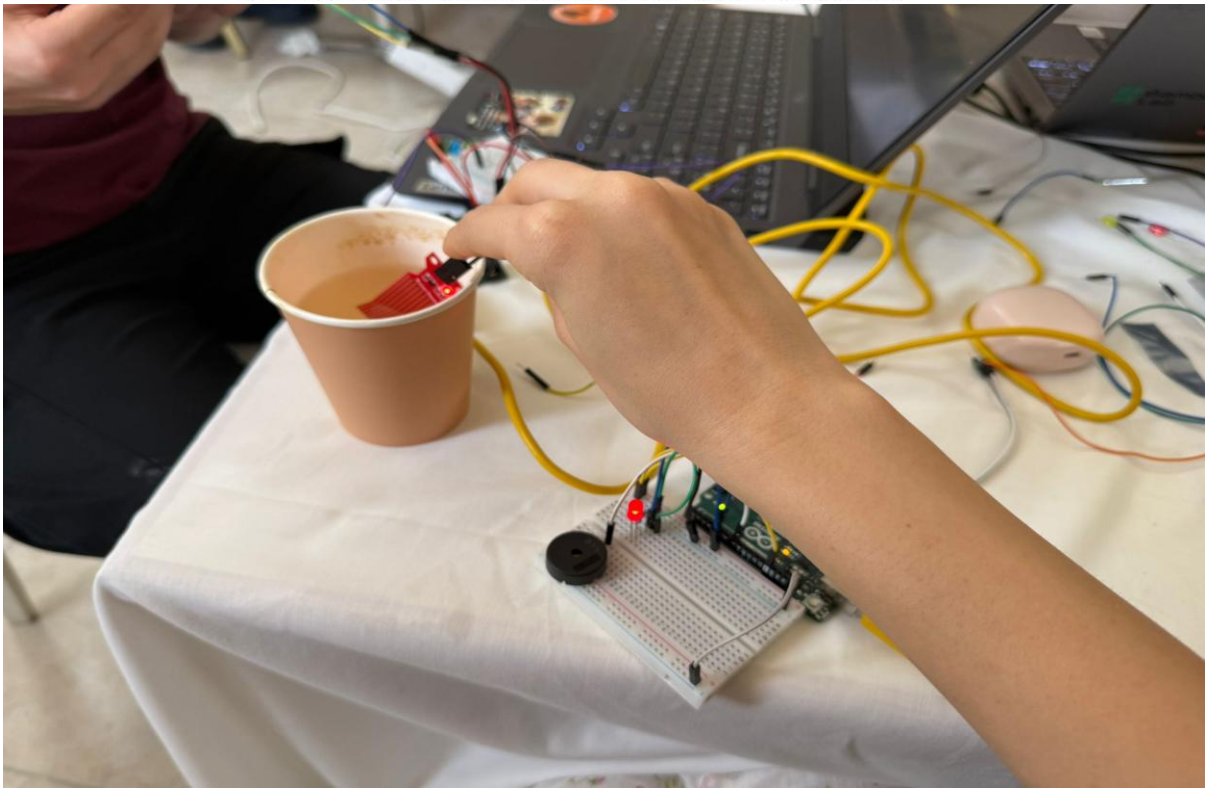
  // Afișăm rezultatul în monitorul serial
  Serial.print("Distance: ");
  Serial.print(distance);
  Serial.println(" cm");

  delay(100); // Pauză scurtă înainte de următoarea măsurătoare
}
```

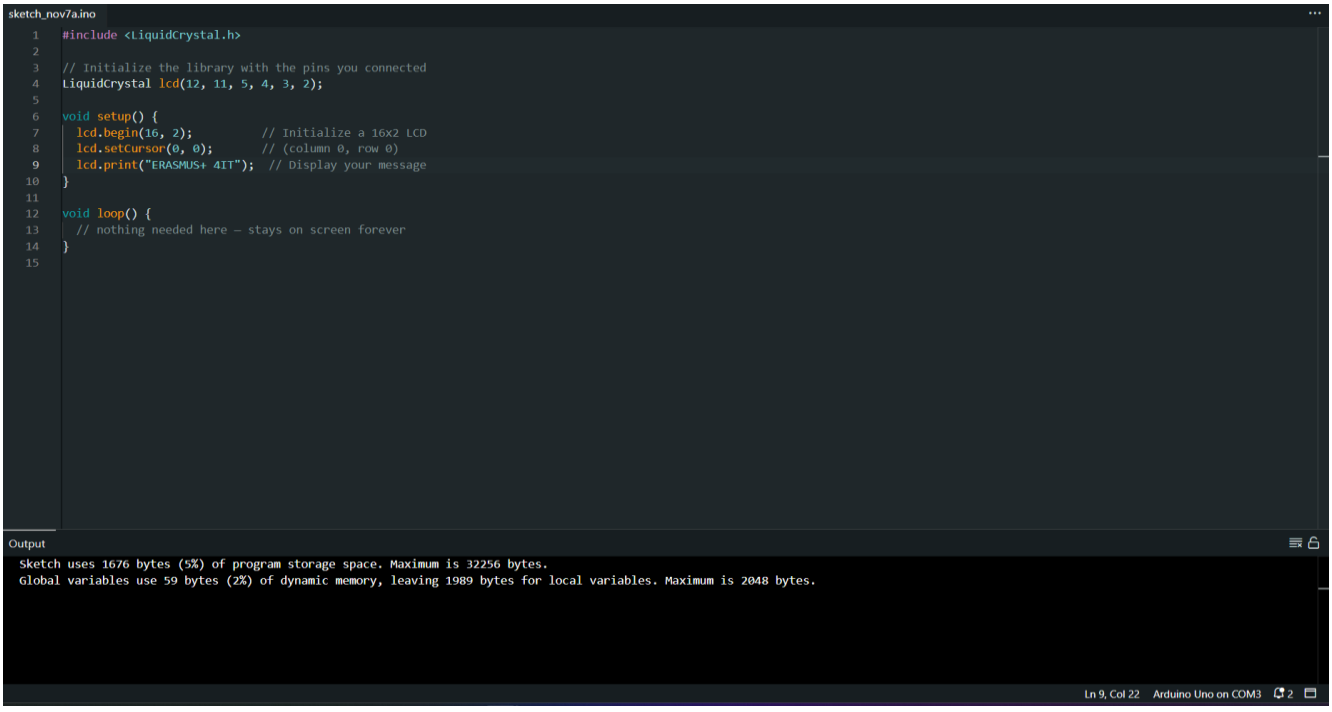


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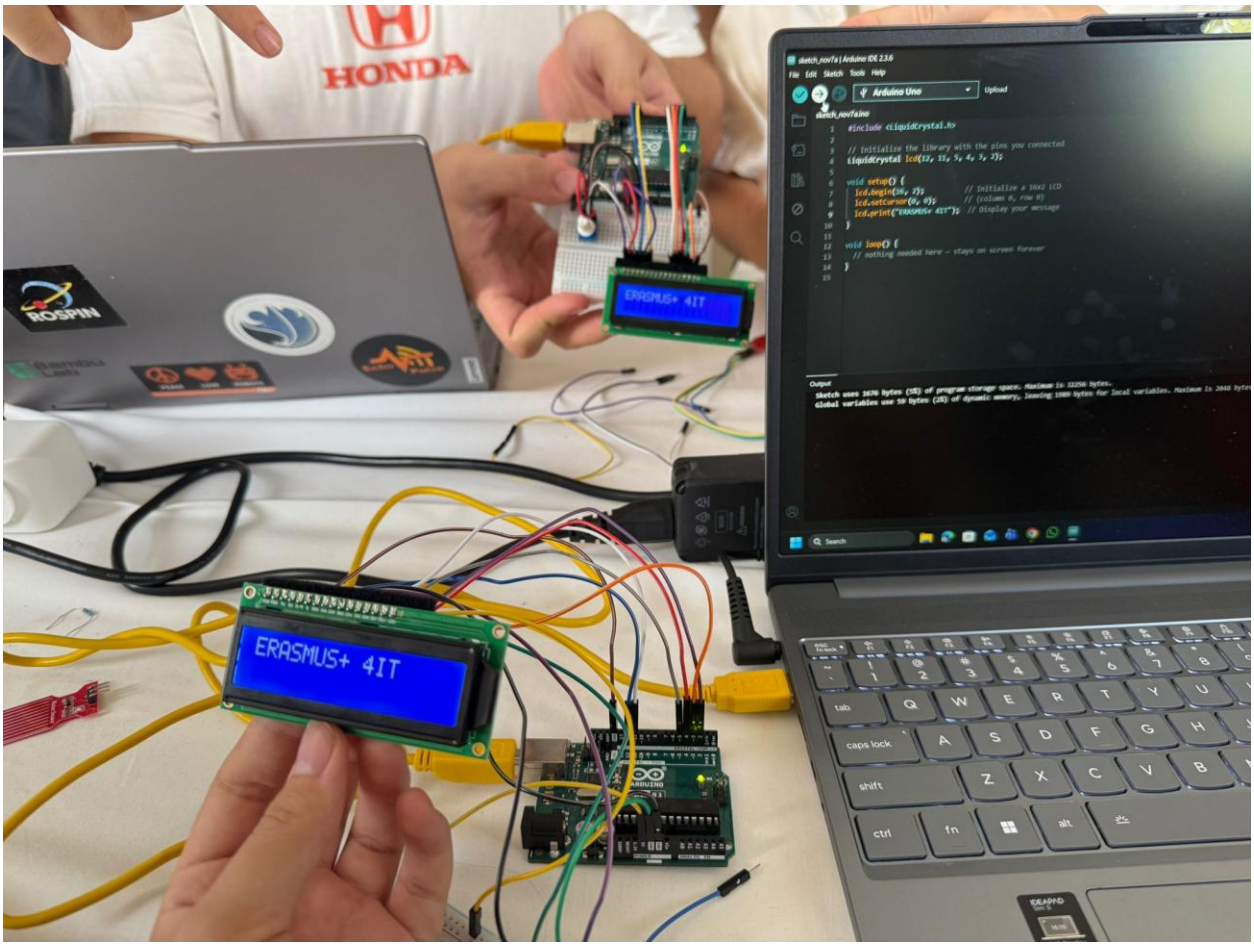
4. Conectarea unui ecran LCD



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