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

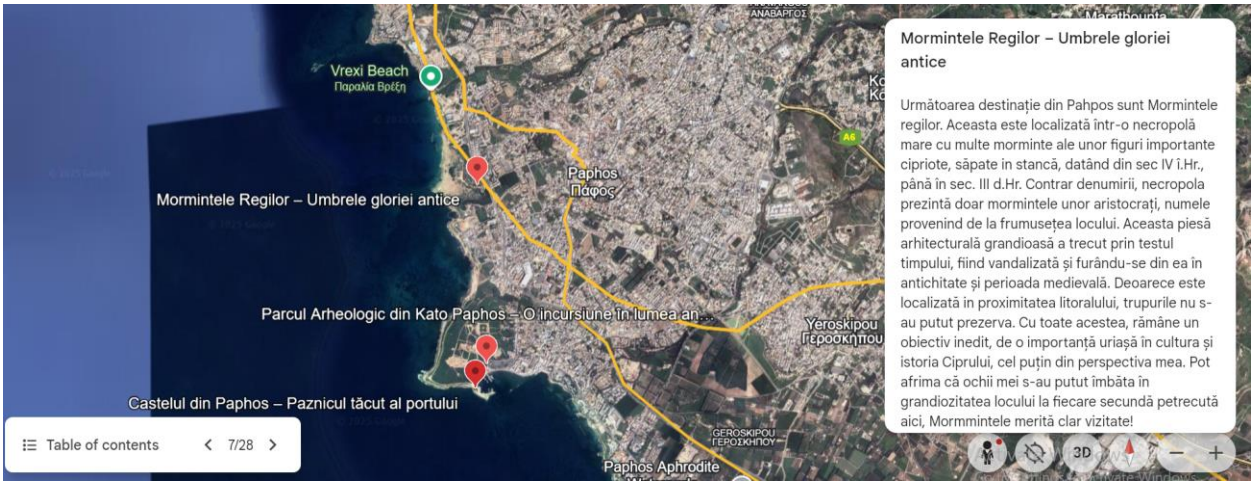
Practice tutor: Lazaros Lazarou

Participant: Marco Dascălu

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Pregătire culturală:

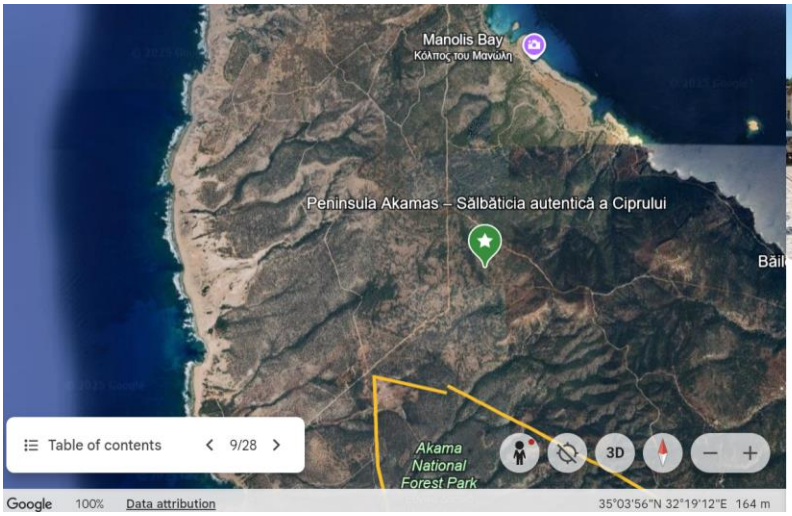




DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

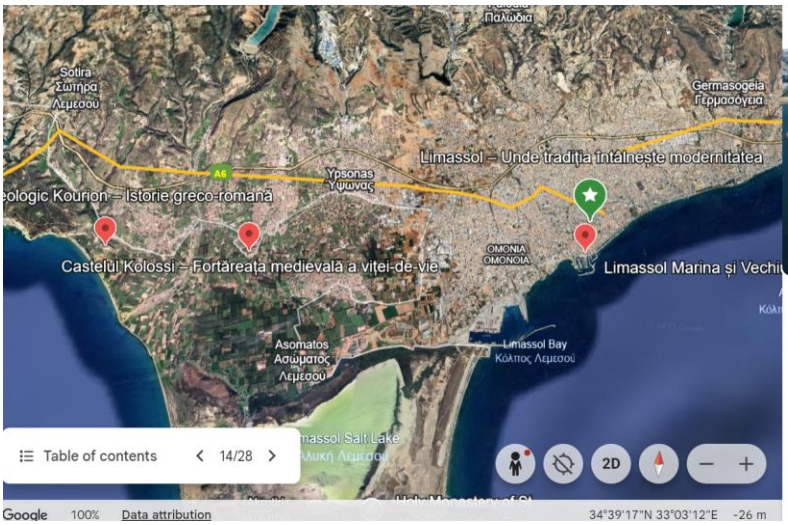
Co-funded by the Erasmus+ Programme of the European Union

2025-1-RO01-KA121-VET-000319082





Următoarea noastră oprire este **Peninsula Akamas**, una dintre cele mai sălbatice și spectaculoase zone ale Ciprului. Aici, natura se dezvăluie în toată splendoarea ei: stânci abrupte, poteci care șerpuiesc printre plante mediteraneene și priveliști largi asupra Mării Mediterane, de un albastru adânc. Aerul curat și liniștea locului sunt întrerupte doar de sunetul valurilor și cântecul păsărilor. În interiorul peninsulei se află și plaja **Lára**, cunoscută pentru țestoasele care își depun ouăle aici; nisipul fin și atmosfera neatinsă de civilizație te fac să te simți departe de agitația orașului. Peninsula Akamas este locul ideal pentru momente de contemplare și conectare cu natura pură, oferind experiențe memorabile și peisaje care rămân în suflet mult timp după ce pleci.



Limassol – Unde tradiția întâlnește modernitatea



Următorul nostru oraș pe traseu este **Limassol**, situat pe coasta de sud a Ciprului și cunoscut pentru combinația armonioasă între istorie, cultură și viață modernă. Orașul se întinde pe malul mării și impresionează prin portul său animat, plajele întinse și centrul vechi plin de culoare, unde clădirile tradiționale stau alături de cafenele și buticuri moderne. Limassol are o energie vibrantă, dar păstrează și urmele trecutului: castelul medieval, vechi ruine grecești și situri arheologice ne amintesc de importanța sa de-a lungul secolelor. Plimbându-ne pe promenade, am simțit cum tradiția cipriotă se împletește cu spiritul cosmopolit al orașului, făcând din Limassol un loc captivant atât pentru explorare culturală, cât și pentru relaxare.

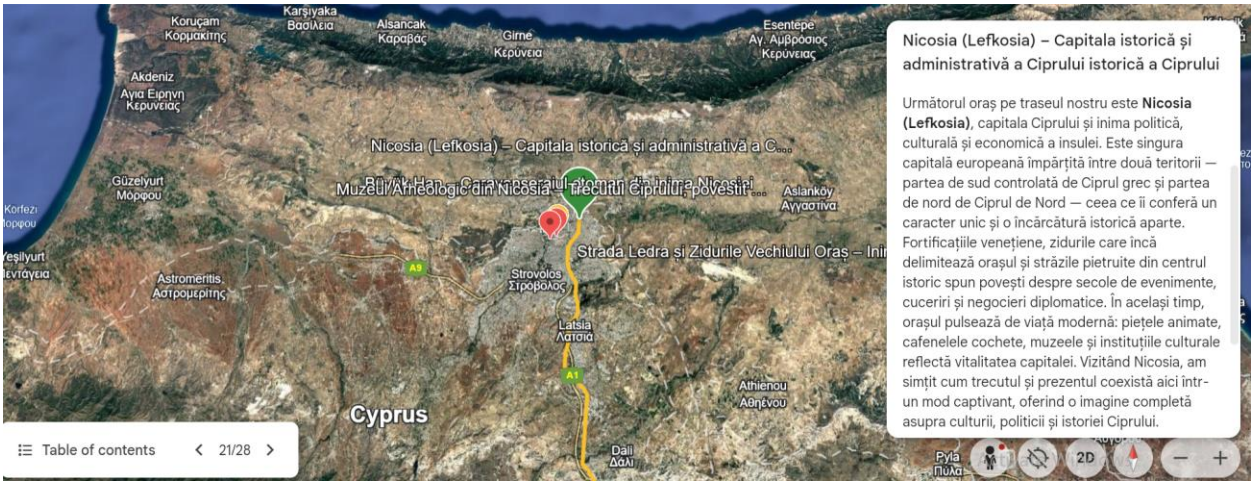
DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union

Erasmus+

2025-1-RO01-KA121-VET-000319082



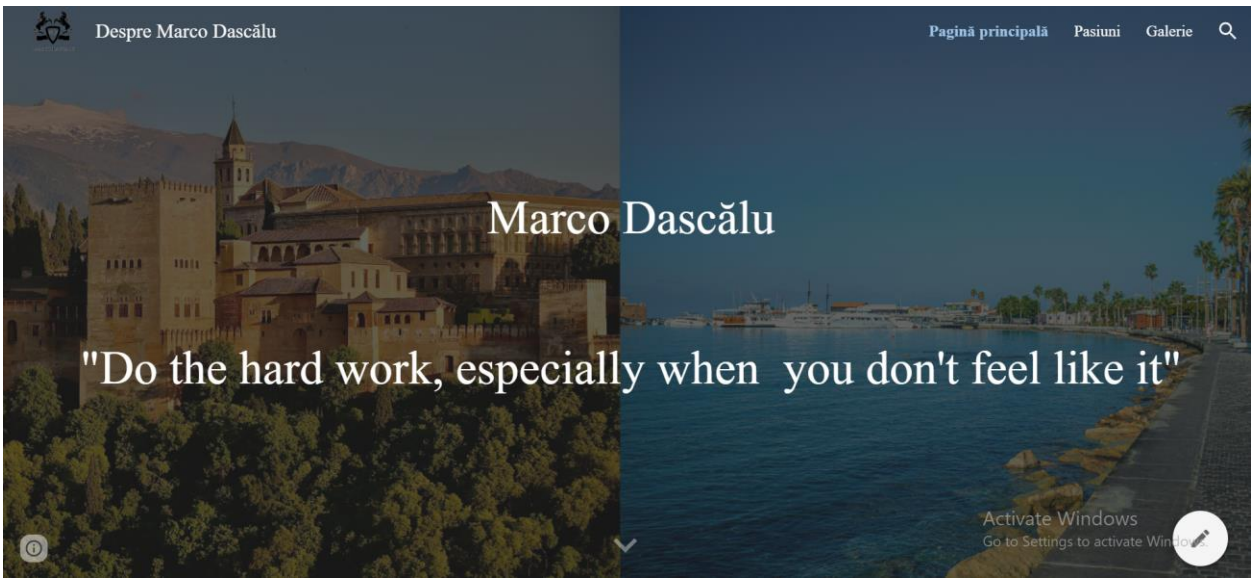


DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union

2025-1-RO01-KA121-VET-000319082

Site:

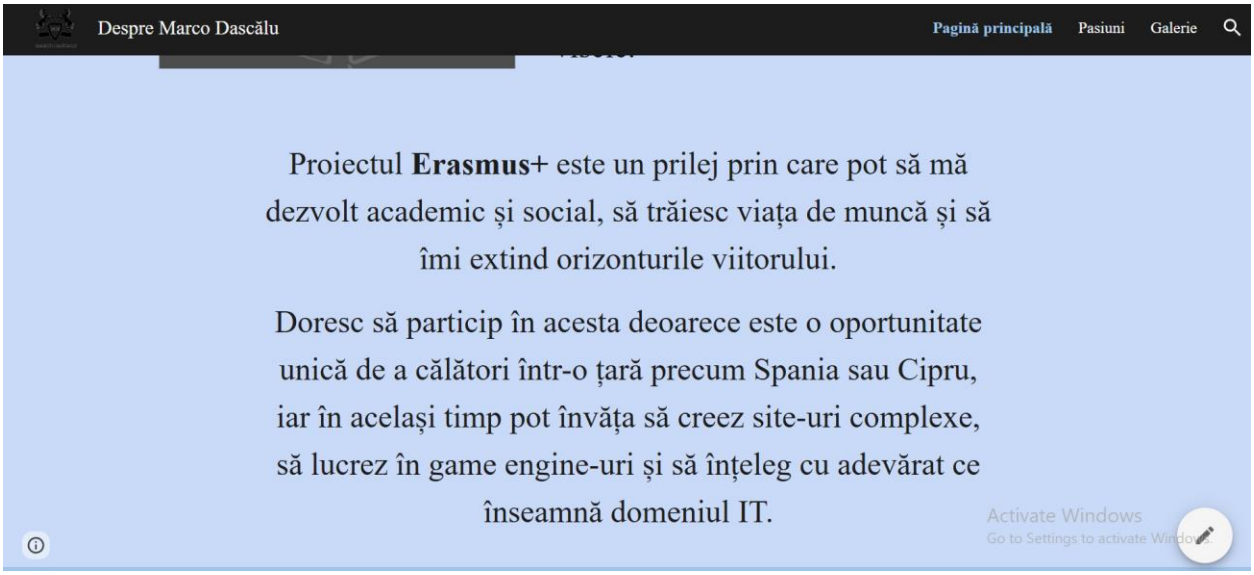


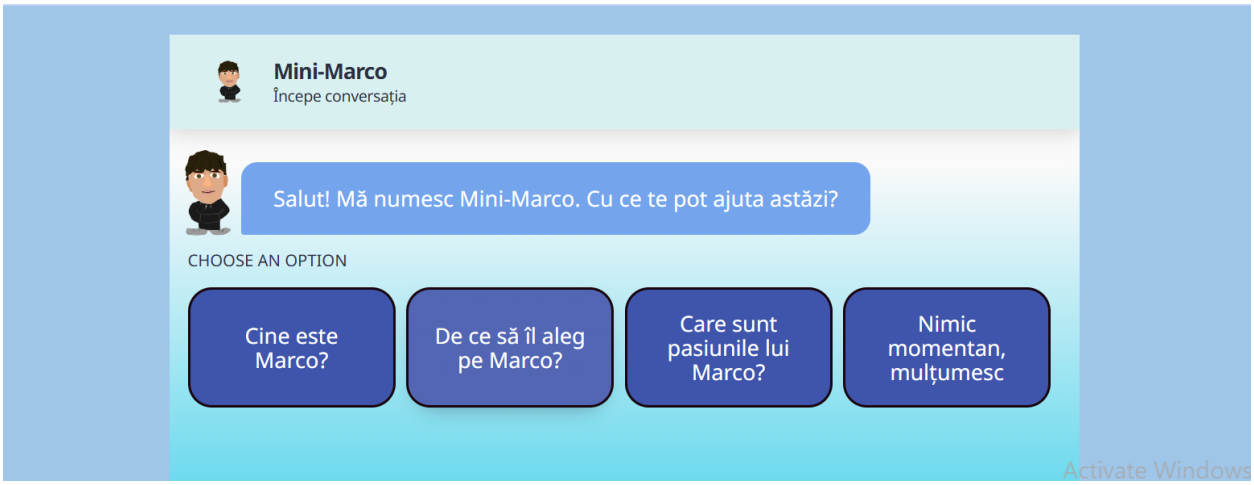


DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union

2025-1-RO01-KA121-VET-000319082

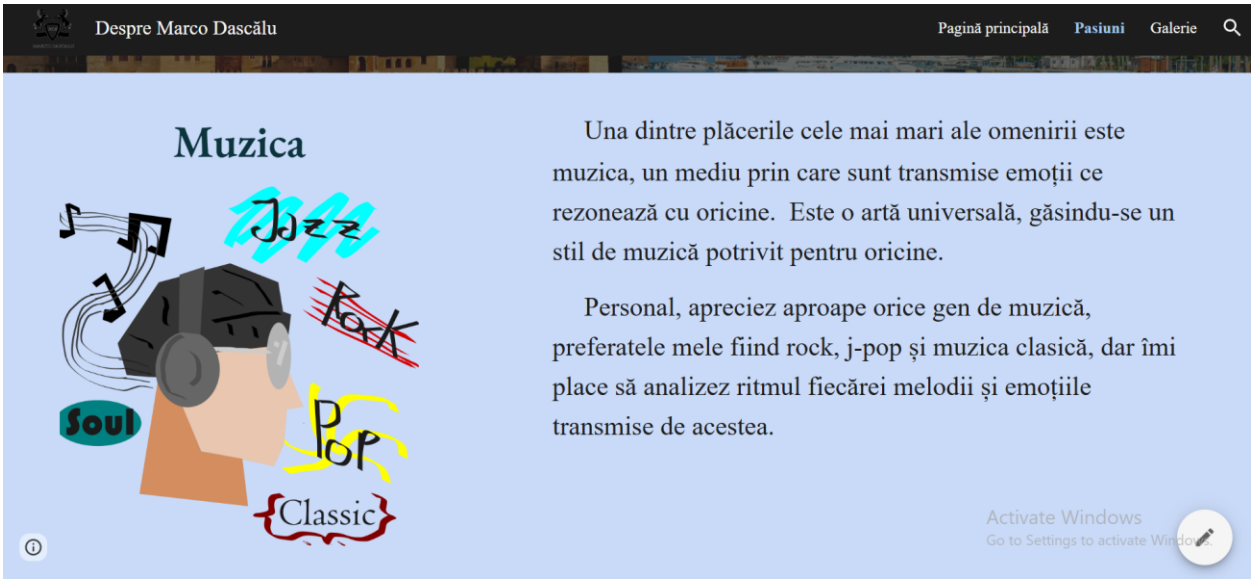




DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union

2025-1-RO01-KA121-VET-000319082





DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union
Erasmus+
2025-1-RO01-KA121-VET-000319082

Stagiu practică:

Aici, în programul C++, am folosit pointere pentru a stoca informații prin ,,growing arrays,,. Astfel am calculat și am salvat notele la 2 examene și media lor, pentru un număr specific de elevi.

```cpp
#include <iostream>
using namespace std;
float *exam1, *exam2, *avrg;
float *temp1, *temp2;
int StudentNumber = 0;
int n=0, tempNum=0;

int main()
{
    cout<<"Choose a number of students to grade: ";
    cin>>StudentNumber;
    exam1=new float[StudentNumber];
    exam2=new float[StudentNumber];
    avrg=new float[StudentNumber];

        do{
            cout<<"For student "<<n+1<<":"<<endl;
            cout<<"-----------"<<endl;
            cout<<"Exam 1 grade: ";
            cin>>exam1[n];
            cout<<"Exam 2 grade: ";
            cin>>exam2[n];
            avrg[n]=(exam1[n]+exam2[n])/2;

            n++;
            if (n>=StudentNumber){
                cout<<"Out of space!Would yo ulike to add more space?Please enter how many(0 to exit): ";
                cin>>tempNum;
                if (tempNum>0){
                    StudentNumber=StudentNumber+tempNum;
                    temp1=new float[StudentNumber];
                    temp2=new float[StudentNumber];
```

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union

2025-1-RO01-KA121-VET-000319082

```
        n++;
        if (n>=StudentNumber){
            cout<<"Out of space!Would yo ulike to add more space?Please enter how many(0 to exit): ";
            cin>>tempNum;
            if (tempNum>0){
                StudentNumber=StudentNumber+tempNum;
                temp1=new float[StudentNumber];
                temp2=new float[StudentNumber];
                for(int i=0; i<n;i++) {
                    temp1[i]=exam1[i];
                    temp2[i]=exam2[i];
                }
                delete []exam1;
                delete []exam2;
                exam1=temp1;
                exam2=temp2;
            }
        }
    }while(n < StudentNumber);
        cout<<"\n\n\n";
    cout<<"-------CLASS RESULTS------\n\n";
    for(n=0;n<StudentNumber;n++){
        cout<<"Studentd "<<n+1<<endl;
        cout<<"---------------\n";
        cout<<"exam 1 grade: "<<exam1[n]<<endl;
        cout<<"exam 2 grade: "<<exam2[n]<<endl;
        cout<<"Average grade: "<<avrg[n]<<endl<<endl;
    }


return 0;
}
```

```
-------CLASS RESULTS------

Studentd 1
---------------
exam 1 grade: 4
exam 2 grade: 5
Average grade: 4.5

Studentd 2
---------------
exam 1 grade: 5
exam 2 grade: 6
Average grade: 5.5

Studentd 3
---------------
exam 1 grade: 4
exam 2 grade: 9
Average grade: 6.5



...Program finished with exit code 0
Press ENTER to exit console.
```

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Aici este un exemplu asemanator, dar care stochează informațiile mașinilor inserate de noi:

```cpp

#include <iostream>
using namespace std;

class cars{
    private:
        string brand;
        string model;
        int year;
        int hp;

    public:
        void setBrand(string b){brand=b;}
        void setModel(string m){model=m;}
        void setYear(int y){year=y;}
        void setHp(int h){hp=h;}

        string getBrand(){return brand;}
        string getModel(){return model;}
        int getYear(){return year;}
        int getHp(){return hp;}

};

int main()
{
    cars *someCars;
    cars *tempCar;
    string brand;
    string model;
    int year;
    int hp;
    int n=0, tempN=0, maxSize;
```

```cpp

   cout << "autovehicle count: "; cin >> maxSize;

   someCars = new cars [maxSize];


   do{
      cout<<"Brand: ";
      cin>>brand;
      someCars[n].setBrand(brand);
      cout<<"Model: ";
      cin>>model;
      someCars[n].setModel(model);
      cout<<"Year: ";
      cin>>year;
      someCars[n].setYear(year);
      cout<<"HP: ";
      cin>>hp;
      someCars[n].setHp(hp);
      n++;
      if (n>=maxSize) {
          cout << "out of space!insert more space (or 0 to exit)";
          cin >> tempN;
          maxSize = maxSize + tempN;
          tempCar = new cars [maxSize];
          for (int i=0; i<n; i++) {
              tempCar[i]=someCars[i];
          }
          delete [] someCars;
          someCars = tempCar;
      }
```

Activate

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

```
64          }
65
66
67      } while (n<maxSize);
68
69      cout << "here are your cars: " <<endl <<endl;
70
71      for (int i=0; i<maxSize; i++) {
72          cout << "car " << i+1 <<endl;
73          cout<<"Brand: " <<someCars[i].getBrand() << endl;
74          cout<<"Model: " <<someCars[i].getModel() << endl;
75          cout<<"Year: " <<someCars[i].getYear() << endl;
76          cout<<"Hp: " <<someCars[i].getHp() << endl <<endl;
77      }
78
79      return 0;
80  }
```

Activate Windows
Go to Settings to activate

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Coduri pentru arduino:

arduino_first.ino

```ino
const int trigPin = 4;
const int echoPin = 5;
const int ledPin  = 10;

long duration;
long cm;

void setup() {
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(ledPin, OUTPUT);
  Serial.begin(9600);
}

void loop() {

  // send pulse
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  // receive echo
  duration = pulseIn(echoPin, HIGH);

  // convert to cm
  cm = duration / 27 / 2;

  Serial.print("Distance: ");
  Serial.print(cm);
  Serial.println("cm");

  // condition
  if (cm <= 30) {
    digitalWrite(ledPin, HIGH);   // LED on
  } else {
    digitalWrite(ledPin, LOW);    // LED off
  }

  delay(100);
}

```

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

```ino
const int trigPin = 4;
const int echoPin = 5;
const int ledPin  = 10;
const int ledPin1  = 9;
const int ledPin2  = 8;

long duration;
long cm;

void setup() {
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(ledPin, OUTPUT);
  pinMode(ledPin1, OUTPUT);
  pinMode(ledPin2, OUTPUT);
  Serial.begin(9600);
}

void loop() {

  // send pulse
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  // receive echo
  duration = pulseIn(echoPin, HIGH);

  // convert to cm
  cm = duration / 27 / 2;

  Serial.print("Distance: ");
  Serial.print(cm);
  Serial.println("cm");

  // condition
  if (cm <= 50) {
    digitalWrite(ledPin, HIGH);   // LED on
  } else {
    digitalWrite(ledPin, LOW);    // LED off
  }
  if (cm > 50 && cm <= 100) {
```

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

```
    digitalWrite(ledPin1, HIGH);   // LED on
  } else {
    digitalWrite(ledPin1, LOW);    // LED off
  }
  if (cm > 100) {
    digitalWrite(ledPin2, HIGH);   // LED on
  } else {
    digitalWrite(ledPin2, LOW);    // LED off
  }


  delay(100);
}

```

```

#define LED_PIN     2
#define POWER_PIN   7
#define SIGNAL_PIN  A5
#define THRESHOLD   300

int value = 0;

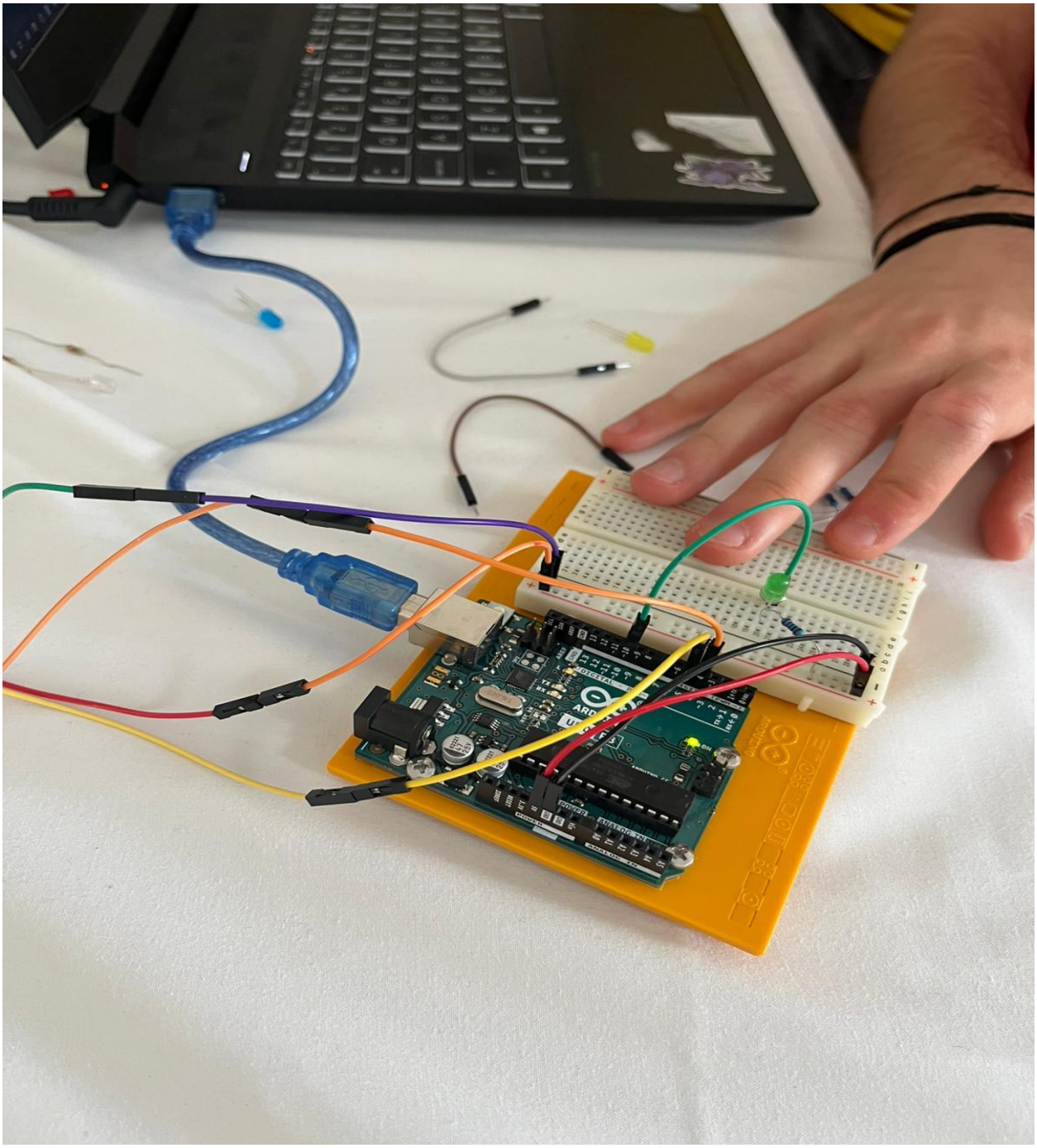
void setup() {
  Serial.begin(9600);
  pinMode(LED_PIN,   OUTPUT);   // configure D2 pin as an OUTPUT
  pinMode(POWER_PIN, OUTPUT);   // configure D7 pin as an OUTPUT
  digitalWrite(POWER_PIN, LOW); // turn the sensor OFF
  digitalWrite(LED_PIN,   LOW); // turn LED OFF
}

void loop() {
  digitalWrite(POWER_PIN, HIGH);  // turn the sensor ON
  delay(10);                      // wait 10 milliseconds
  value = analogRead(SIGNAL_PIN); // read the analog value from sensor
  digitalWrite(POWER_PIN, LOW);   // turn the sensor OFF

  if (value > THRESHOLD) {
    Serial.print("The water is detected");
    digitalWrite(LED_PIN, HIGH);  // turn LED ON
  } else {
    digitalWrite(LED_PIN, LOW);   // turn LED OFF
  }
}

```

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Aici avem un circuit realizat pe o placă arduino, care efectuează un mesaj SOS prin LED-ul conectat.

DISCLAIMER: The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.