

4IT Erasmus+Project 2024-1-RO01-KA121-VET-000214264
Beneficiary Colegiul National Gheorghe Vranceanu, Bacau, Romania

Sending organization: Colegiul National ”Ferdinand” Bacau, Romania

MOBILITY PORTFOLIO
Paphos, Cyprus

Mobility period:
PAPHOS, CYPRUS, 13.04.2025-27.04.2025 – practice period 14.04.2025-25.04.2025

Receiving

Practice tutor: Lazaros Lazarou

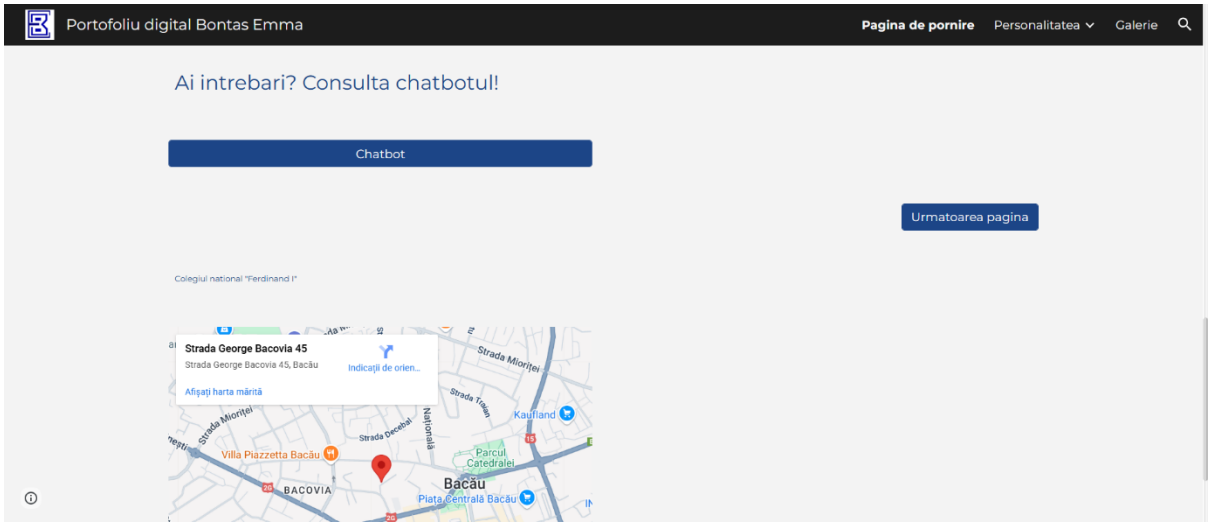
Participant: Bontaş Emma-Elena

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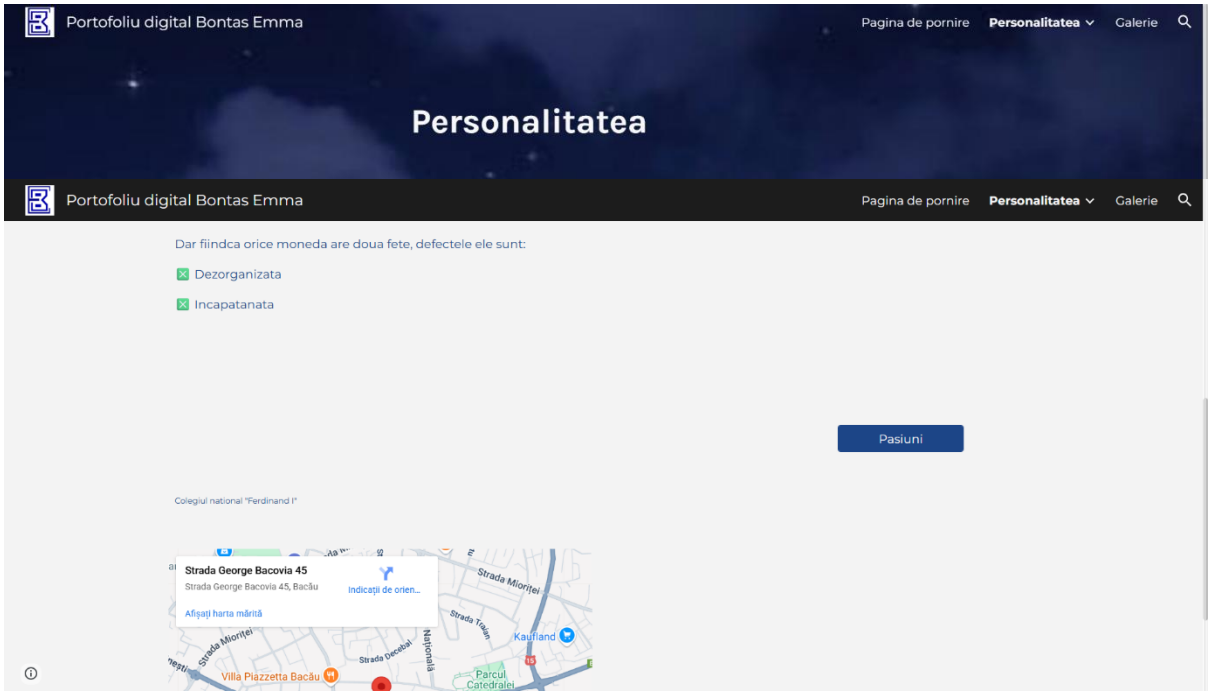
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Bontaş Emma-Elena







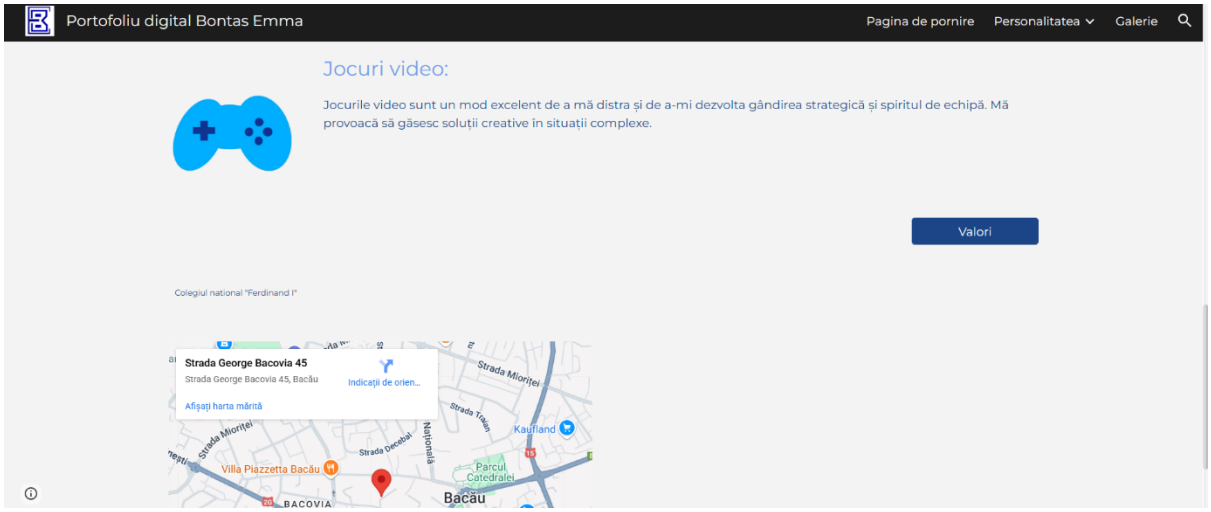
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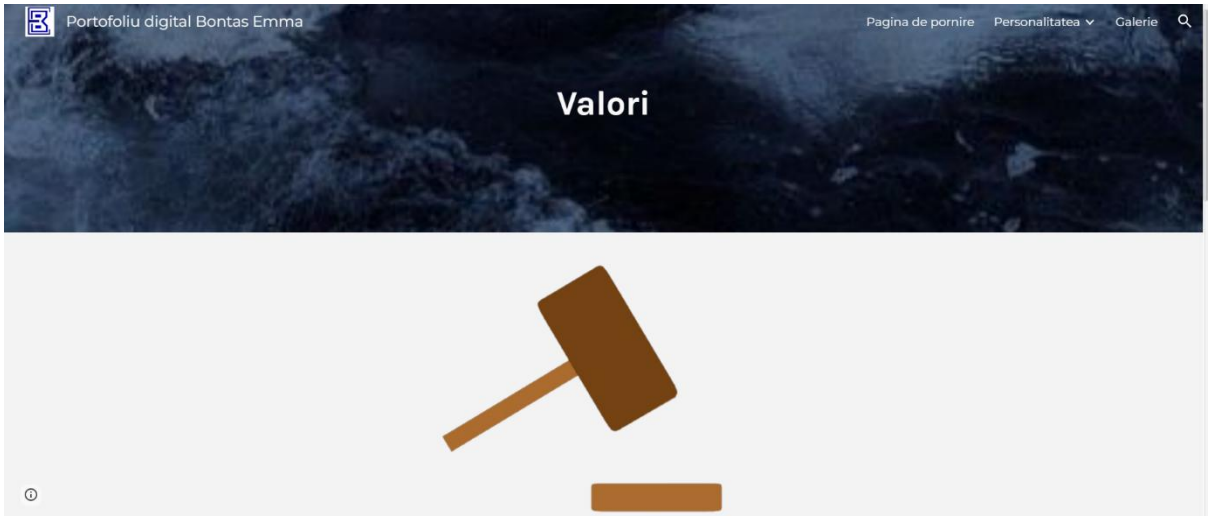


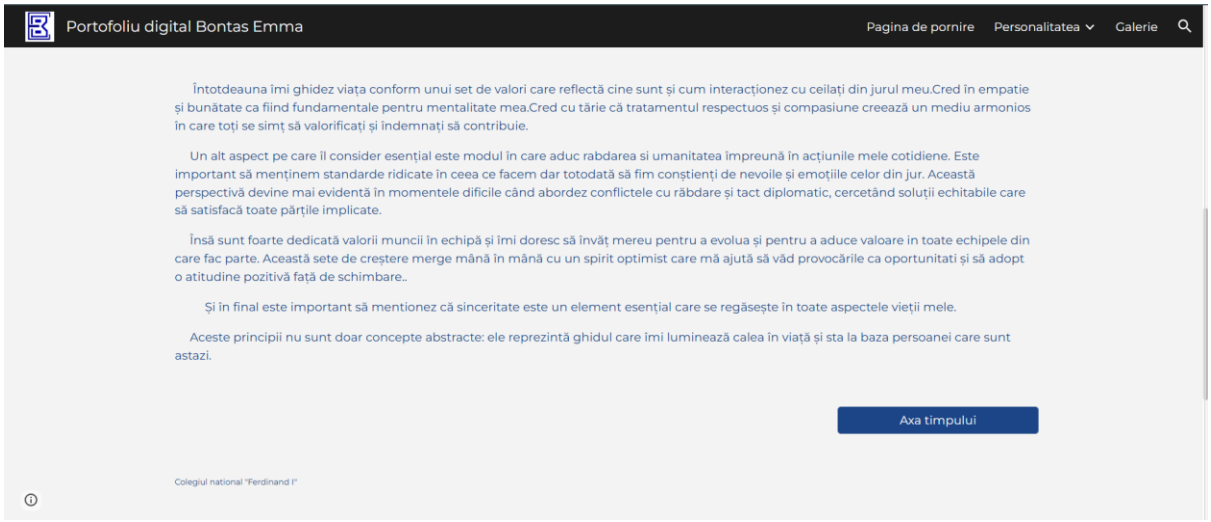




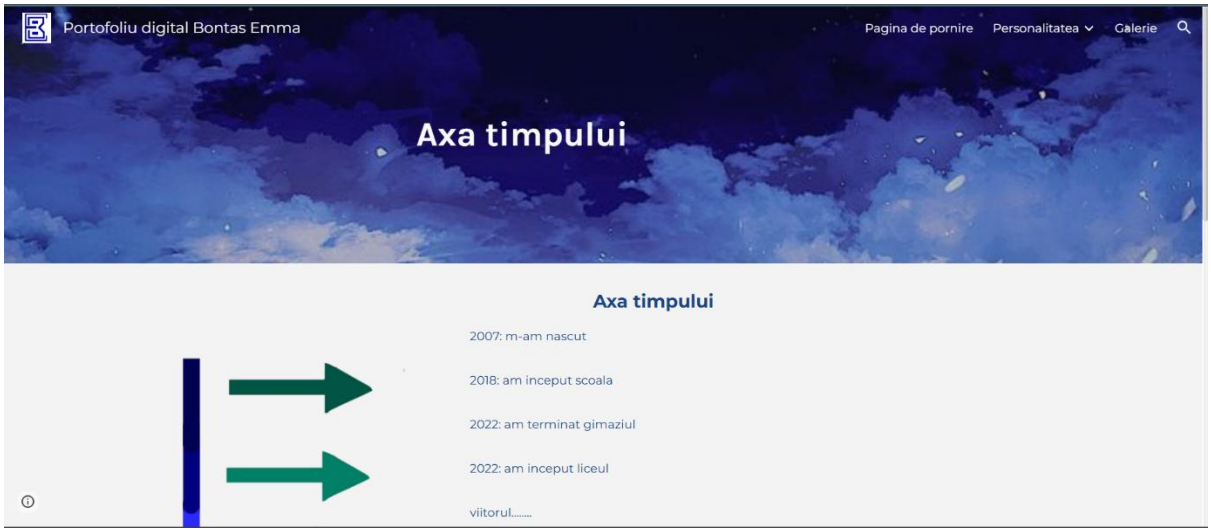
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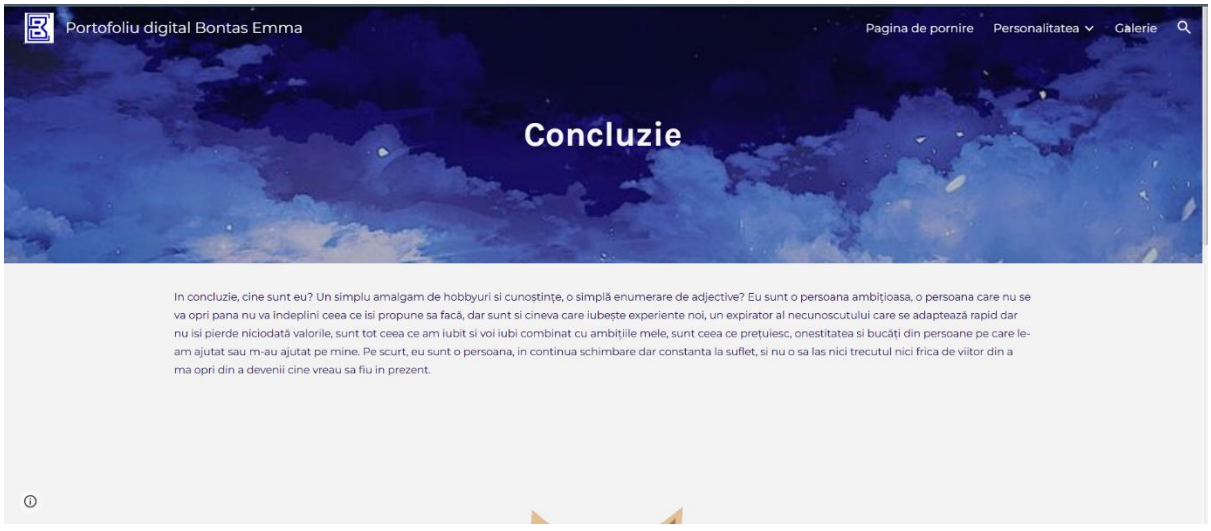




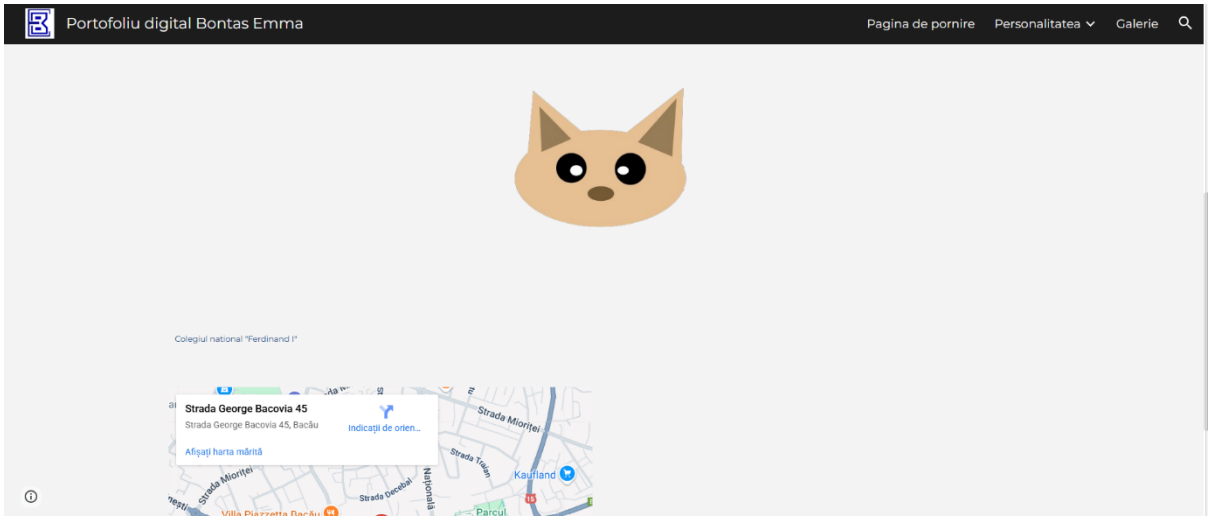
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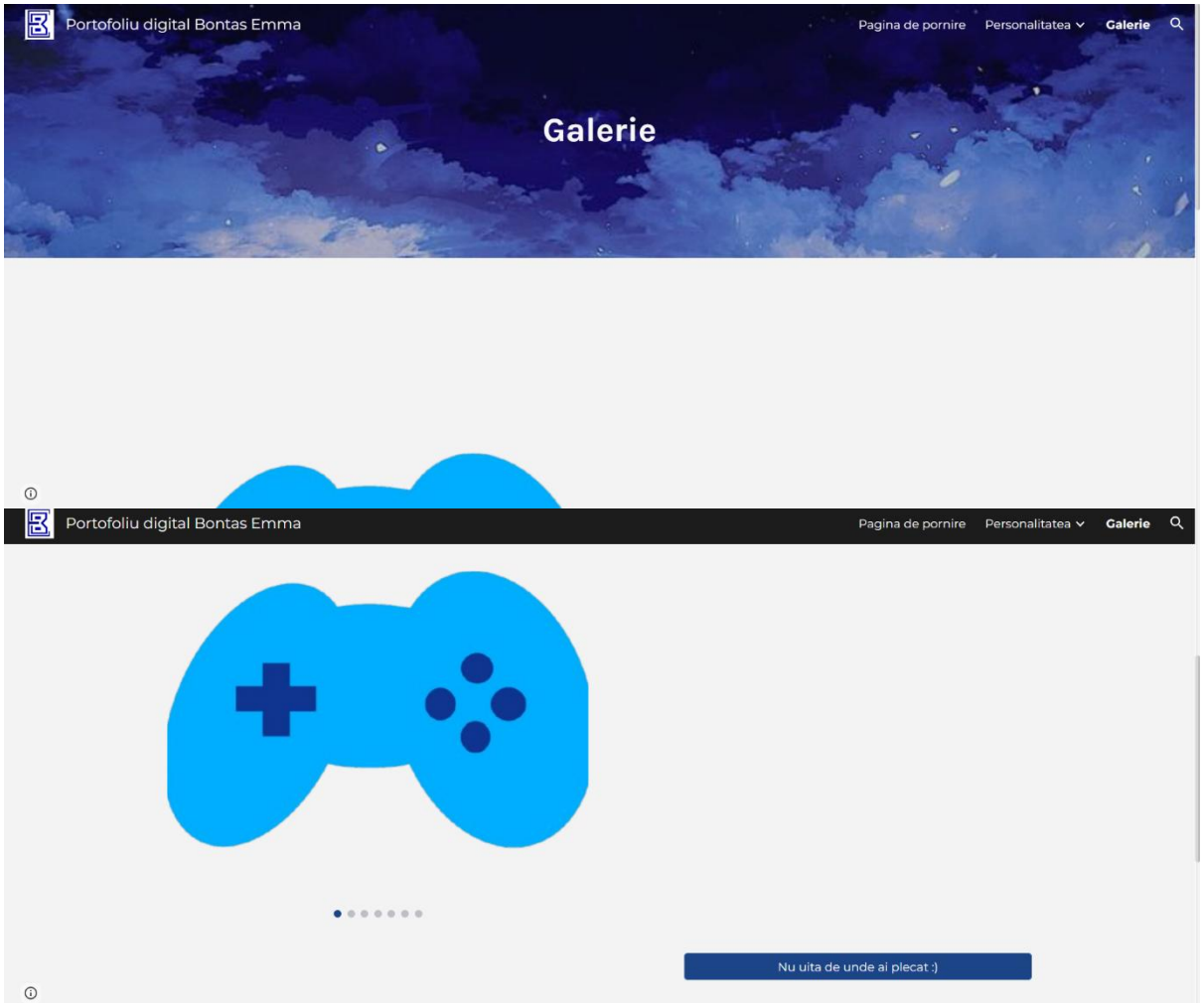






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Training before mobility
-Cultural training
Cultural diversity and combating discrimination





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clima: mediteriana
veri calde si uscate
ierni blande si ploioase
Resurse naturale: zacaminte de
cupru, gips, marmura, petrol
si gaze naturale in
largul coastelor



-Lingvistic training with Stavroula Metaxa

The Greek alphabet

The Greek letter is followed by a close approximation from the roman alphabet and a word to illustrate the sound.

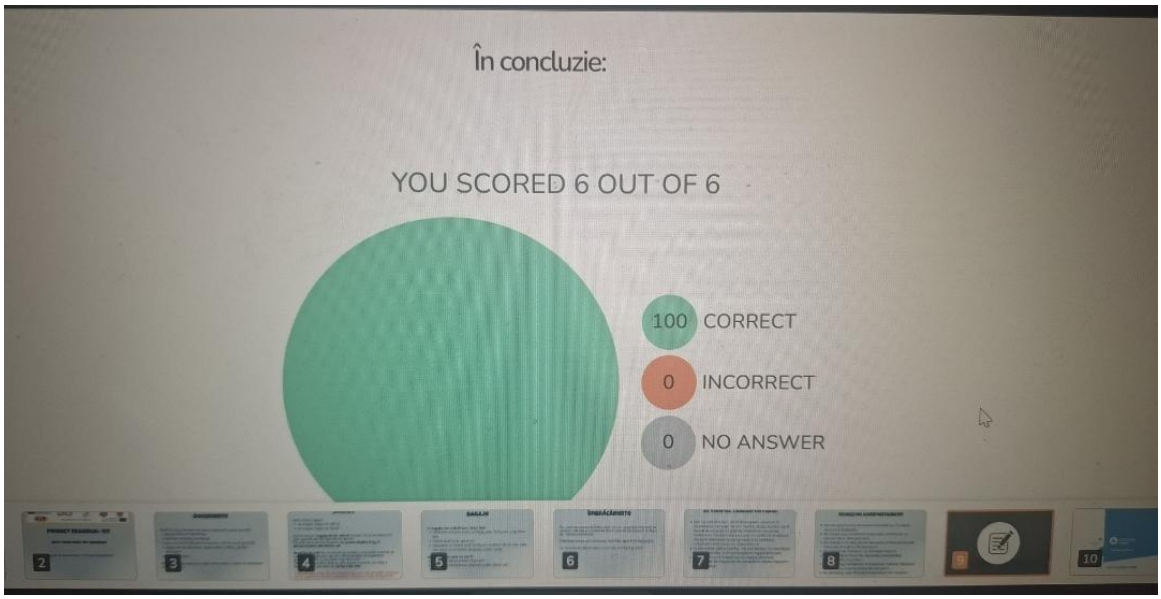
Α	**a** as in **cat**
Β	**v** as in **voice**
Γ (BEFORE A,O,U)	**g** as in **bag**
Γ (BEFORE E AND I)	**y** as in **yes**
Δ	**th** as in **this**
Ε	**e** as in **ten**
Ζ	**z** as in **zoo**
Η	**ee** as in **feet**
Θ	**th** as in **thick**
Ι	**ee** as in **feet**
Κ	**k** as in **king**
Λ	**l** as in **long**
Μ	**m** as in **man**
Ν	**n** as in **not**
Ξ	**x** as in **box**

The Greek alphabet. Letter Combinations

There are also combinations of letters which make a distinct sound when written together. Several of the letter combinations have more than one sound. The sound made depends on the position of the combination within the word.

αι	e as in ten
ει	ee as in feet
οι	ee as in feet
ου	oo as in moon
γγ	ng as in england
γκ	g as in go
μπ (in middle of word)	mb as in slumber
μπ (at start of word)	b as in bat
ντ (at start of word)	d as in dog
ντ (in middle of word)	nd as in bending

-Pedagogic training



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MOBILITY PROJECTS

Dynamic vector example

Start here | *erasmus 14.04.25.t1.cpp

```cpp
#include <iostream>
using namespace std;
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* a;                                     //a is a pointer to an integer. This is going to be our main array to save integers
    int* temp;                                  //temp is a pointer to an integer 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 int[ARRAYSIZE];                     //dynamically create an array with the number the user gave to us.

    do{
        cout<<"Enter number "<<n<<" ->";        //prompt the user to enter the numbers
        cin >> a[n];
        while(a[n]>90 || a[n]<65) {cout<<"The number is not copatible, enter another one"<<endl;
        cout<<"try again! Enter number->";
        cin>>a[n];}
        cout<<"Number saved!"<<endl;
        n++;                                    //after saving the number we have to increase the counter
        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): ";
                                                //LET THE USER KNOW THAT THE ARRAY IS OUT OF SPACE AND ASK HOW MANY MORE NUMBERS THEY NEED TO INPUT
            cin>>tmpN;                          //read how many more number the user needs to input
            if (tmpN > 0){                      //ERROR CHECKING: If the number the user gave us is not zero OR below zero we grow the array
                ARRAYSIZE = ARRAYSIZE + tmpN;   // Add to the previous size the added size the user gave us
                temp = new int[ARRAYSIZE];      // create new temporary bigger array. We need it to copy the contents of the previous array so we don't lose them
                for (int i=0; i<n; i++) {       //We use the for loop to copy the contents from the previous array into the temporary array(which has a bigger size
                    temp[i] = a[i];             // copy values to new array.
                }
                delete [] a;                    // free old array memory. ALSO SEE LAST COMMENT UNDER MAIN
                a = temp;                       // now a points to new array.
            }
        }

    }while (n<ARRAYSIZE);

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

    for (int i=0; i<ARRAYSIZE;i++){
```

C:\Users\diana\OneDrive\Desktop\school & important\erasmus 4it 25\14\eras... C/C++ Windows (CR+LF) WINDOWS-1252 Line 47, Col 40, Pos 3369 Insert Modified Read/Write default

```cpp
    //--- 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 int[ARRAYSIZE];                     //dynamically create an array with the number the user gave to us.

    do{
        cout<<"Enter number "<<n<<" ->";        //prompt the user to enter the numbers
        cin >> a[n];
        while(a[n]>90 || a[n]<65) {cout<<"The number is not copatible, enter another one"<<endl;
        cout<<"try again! Enter number->";
        cin>>a[n];}
        cout<<"Number saved!"<<endl;
        n++;                                    //after saving the number we have to increase the counter
        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): ";
                                                //LET THE USER KNOW THAT THE ARRAY IS OUT OF SPACE AND ASK HOW MANY MORE NUMBERS THEY NEED TO INPUT
            cin>>tmpN;                          //read how many more number the user needs to input
            if (tmpN > 0){                      //ERROR CHECKING: If the number the user gave us is not zero OR below zero we grow the array
                ARRAYSIZE = ARRAYSIZE + tmpN;   // Add to the previous size the added size the user gave us
                temp = new int[ARRAYSIZE];      // create new temporary bigger array. We need it to copy the contents of the previous array so we don't lose them
                for (int i=0; i<n; i++) {       //We use the for loop to copy the contents from the previous array into the temporary array(which has a bigger size
                    temp[i] = a[i];             // copy values to new array.
                }
                delete [] a;                    // free old array memory. ALSO SEE LAST COMMENT UNDER MAIN
                a = temp;                       // now a points to new array.
            }
        }

    }while (n<ARRAYSIZE);

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

    for (int i=0; i<ARRAYSIZE;i++){

        cout<<char(a[i])<<endl;
    }
    delete [] a; //free the memory of a

    return 0;
}
```

Bontaş Emma-Elena

Exemple databases

Start here | classPUBLICPRIVATE (1).cpp

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

class student{
    private:
        string name;
        string lname;
        float exam1;
        float exam2;
    public:
        student(){//constructor: We use constructors to initialize the object's variables
            name="EMPTY";
            lname="EMPTY";
            exam1=1.1;
            exam2=1.1;
        }
    void setName(string n){  name=n; }
    void setLname(string l){ lname=l; }
    void setExam1(float e1){ exam1=e1;}
    void setExam2(float e2){ exam2=e2;}
    string getName(){ return name;}
    string getLname(){ return lname;}
    float getExam1(){ return exam1;}
    float getExam2(){ return exam2;}
};

int main(){
    const int MAXSTUDENTS=5;
    student myclass[MAXSTUDENTS];
    string tname="", tlname="";
    float texam1=0.0, texam2=0.0;

    for (int i=0;i<MAXSTUDENTS;i++){

        cout<<"Name "<<i<<": ";
```

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File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help

Start here | *classPUBLICPRIVATE (1).cpp

```cpp
    const int MAXSTUDENTS=5;
    student myclass[MAXSTUDENTS];
    string tname="", tlname="";
    float texam1=0.0, texam2=0.0;

    for (int i=0;i<MAXSTUDENTS;i++){

        cout<<"Name "<<i<<": ";
        cin>>tname;
        myclass[i].setName(tname);

        cout<<"Last Name "<<i<<": ";
        cin>>tlname;
        myclass[i].setLname(tlname);

        cout<<"1st Exam "<<i<<": ";
        cin>>texam1;
        myclass[i].setExam1(texam1);


        cout<<"2nd Exam "<<i<<": ";
        cin>>texam2;
        myclass[i].setExam2(texam2);

    }
    cout<<endl<<endl<<endl;
    cout<<"---------YOU HAVE SAVED THE FOLLOWING INFO ----------"<<endl;
    for (int i=0;i<MAXSTUDENTS;i++){

        cout<<myclass[i].getName()<<" "<<myclass[i].getLname()<<endl;
        cout<<"Exam 1: "<<myclass[i].getExam1()<<" - Exam2: "<<myclass[i].getExam2()<<endl;
    }
    return 0;
}
```

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Exemple arguments

Start here | ex 1.cpp

```cpp

#include <iostream>
using namespace std;
int main(int argc, char* argv)
{
// /h   /s   /t
  cout<<"you have entered"<<argc
      <<" arguments:"<<endl;
      //using a while loop to iterate trought arguments
      int i=1;
      while(i<argc)
      {cout<<"Argument "<<i+1<<" :"<<argv[i]
      <<endl;
         if strcmp(argv[1],"/h")
         {
             //write code to show help

         }
         if strcmp(argv[1],"/s")
         {
             //write code to implement /s options

         }
         if strcmp(argv[1],"/t")
         {
             //write code to implement /t options

         }

         }
      i++;
      }

   return 0;
}
```

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Final project- a database for a store

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

class market {
private:
    string brand;
    string type;
    double price;
    int stock;
public:
    Market() {
        brand = "EMPTY";
        type = "EMPTY";
        price = 0.0;
        stock = 0;
    }

    void setBrand(string B) {
        brand = B;
    }
    void setType(string T) {
        type = T;
    }
    void setPrice(double P) {
        price = P;
    }
    void setStock(int S) {
        stock = S;
    }

    string getBrand() {
        return brand;
    }
    string getType() {
```

```cpp
    }
    string getType() {
        return type;
    }
    double getPrice() {
        return price;
    }
    int getStock() {
        return stock;
    }

    void displayItem() {
        cout << "Brand: " << brand
             << ", Type: " << type
             << ", Price: $" << price
             << ", Stock: " << stock << endl;
    }
};
int MAXITEMS=0;
market *myMarket= nullptr;
void enterData() {
/*  string inputStr;
    double inputPrice;
    int inputStock;*/
    string tBrand="", tType="";

    float tPrice=0.0;

    int tstock=0;

    cout << "How many products would you like to enter?:";

    cin >> MAXITEMS;

    myMarket = new market [MAXITEMS]
```

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```
67
68      myMarket = new market [MAXITEMS]
69
70      for (int i = 0; i < MAXITEMS; i++) {
71          cout << "Enter data for item number " << i + 1 << endl;
72          cout << "Brand: ";
73          cin >> inputStr;
74          storeItems[i].setBrand(inputStr);
75
76          cout << "Type: ";
77          cin >> inputStr;
78          storeItems[i].setType(inputStr);
79
80          cout << "Price: $";
81          cin >> inputPrice;
82          storeItems[i].setPrice(inputPrice);
83
84          cout << "Stock: ";
85          cin >> inputStock;
86          storeItems[i].setStock(inputStock);
87
88          cout << "--------------------------" << endl;
89      }
90  }
91  void displayAll() {
92      for (int i = 0; i < MAXITEMS; i++) {
93          cout << "Item #" << i + 1 << ": ";
94          storeItems[i].displayItem();
95      }
96  }
97
98  void searchByBrand() {
99      string searchTerm;
100     cout << "Enter brand to search: ";
101     cin >> searchTerm;
```

```
100     cout << "Enter brand to search: ";
101     cin >> searchTerm;
102
103     bool found = false;
104     for (int i = 0; i < MAXITEMS; i++) {
105         if (storeItems[i].getBrand() == searchTerm) {
106             storeItems[i].displayItem();
107             found = true;
108         }
109     }
110     if (!found) {
111         cout << "No item found with brand: " << searchTerm << endl;
112     }
113 }
114
115 void searchByType() {
116     string searchTerm;
117     cout << "Enter type to search: ";
118     cin >> searchTerm;
119
120     bool found = false;
121     for (int i = 0; i < MAXITEMS; i++) {
122         if (storeItems[i].getType() == searchTerm) {
123             storeItems[i].displayItem();
124             found = true;
125         }
126     }
127     if (!found) {
128         cout << "No item found with type: " << searchTerm << endl;
129     }
130 }
131
132 void searchByPrice() {
133     double searchTerm;
134     cout << "Enter price to search: ";
```

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```
133     double searchTerm;
134     cout << "Enter price to search: ";
135     cin >> searchTerm;
136
137     bool found = false;
138     for (int i = 0; i < MAXITEMS; i++) {
139         if (storeItems[i].getPrice() == searchTerm) {
140             storeItems[i].displayItem();
141             found = true;
142         }
143     }
144     if (!found) {
145         cout << "No item found with price: $" << searchTerm << endl;
146     }
147 }
148
149 void searchByStock() {
150     int searchTerm;
151     cout << "Enter stock quantity to search: ";
152     cin >> searchTerm;
153
154     bool found = false;
155     for (int i = 0; i < MAXITEMS; i++) {
156         if (storeItems[i].getStock() == searchTerm) {
157             storeItems[i].displayItem();
158             found = true;
159         }
160     }
161     if (!found) {
162         cout << "No item found with stock: " << searchTerm << endl;
163     }
164 }
165
166 // Menu
167 void menu() {
```

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```cpp
// Menu
void menu() {
    int choice;
    do {
        cout << "--- Store Inventory Menu ---" << endl;
        cout << "1. Enter Data" << endl;
        cout << "2. Display All Items" << endl;
        cout << "3. Search by Brand" << endl;
        cout << "4. Search by Type" << endl;
        cout << "5. Search by Price" << endl;
        cout << "6. Search by Stock" << endl;
        cout << "0. Exit" << endl;
        cout << "Select an option: ";
        cin >> choice;

        switch (choice) {
        case 1:
            enterData();
            break;
        case 2:
            displayAll();
            break;
        case 3:
            searchByBrand();
            break;
        case 4:
            searchByType();
            break;
        case 5:
            searchByPrice();
            break;
        case 6:
            searchByStock();
            break;
        case 0:
```

```cpp
        switch (choice) {
        case 1:
            enterData();
            break;
        case 2:
            displayAll();
            break;
        case 3:
            searchByBrand();
            break;
        case 4:
            searchByType();
            break;
        case 5:
            searchByPrice();
            break;
        case 6:
            searchByStock();
            break;
        case 0:
            cout << "Exiting program..." << endl;
            break;
        default:
            cout << "Invalid option. Try again." << endl;
        }
    } while (choice != 0);
}

int main() {
    menu();
    return 0;
}
```

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Program run:

```
--- Store Inventory Menu ---
1. Enter Data
2. Display All Items
3. Search by Brand
4. Search by Type
5. Search by Price
6. Search by Stock
0. Exit
Select an option: 1
How many products would you like to enter?: 3
Enter data for item number 1
Brand: Lipton
Type: Tea
Price: $3
Stock: 250
--------------------------
Enter data for item number 2
Brand: Oreo
Type: Biscuit
Price: $2
Stock: 402
--------------------------
Enter data for item number 3
Brand: Dove
Type: Shampoo
Price: $5
Stock: 123
--------------------------

--- Store Inventory Menu ---
1. Enter Data
2. Display All Items
3. Search by Brand
4. Search by Type
5. Search by Price
6. Search by Stock
0. Exit
Select an option: 3
Enter brand to search: Oreo
Brand: Oreo, Type: Biscuit, Price: $2, Stock: 402

--- Store Inventory Menu ---
1. Enter Data
2. Display All Items
```

```
3. Search by Brand
4. Search by Type
5. Search by Price
6. Search by Stock
0. Exit
Select an option: 6
Enter stock quantity to search: 124
No item found with stock: 124

--- Store Inventory Menu ---
1. Enter Data
2. Display All Items
3. Search by Brand
4. Search by Type
5. Search by Price
6. Search by Stock
0. Exit
Select an option: 4
Enter type to search: Tea
Brand: Lipton, Type: Tea, Price: $3, Stock: 250

--- Store Inventory Menu ---
1. Enter Data
```

```
3. Search by Brand
4. Search by Type
5. Search by Price
6. Search by Stock
0. Exit
Select an option: 4
Enter type to search: Tea
Brand: Lipton, Type: Tea, Price: $3, Stock: 250

--- Store Inventory Menu ---
1. Enter Data
2. Display All Items
3. Search by Brand
4. Search by Type
5. Search by Price
6. Search by Stock
0. Exit
Select an option: 0
Exiting program...


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

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Arduino

