Міністерство освіти і науки, молоді та спорту України

Національний технічний університет України

«Київський політехнічний інститут»

Фізико-технічний інститут

**Лабораторна робота з програмування № 10**

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**Формулювання завдання**

Поиск по телефонной книге с возможностью введения нескольких ключей поиска.

**Програмний код**

## **l10\_classes.py**

|  |  |
| --- | --- |
| class PhoneNumber: |  |
|  | def \_\_init\_\_(self, name, number, mail): |
|  | self.name = name |
|  | self.number = number |
|  | self.mail = mail |
|  |  |
|  | def display\_info(self): |
|  | print("Name: ", self.name) |
|  | print("Number: ", self.number) |
|  | print("Mail: ", self.mail) |

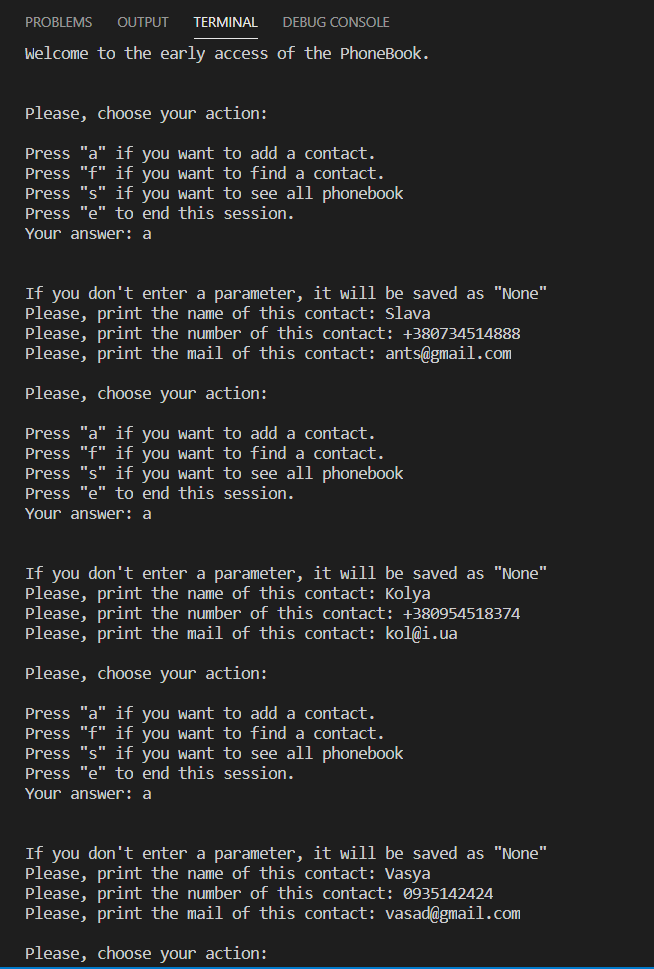
**l10\_funcs.py**

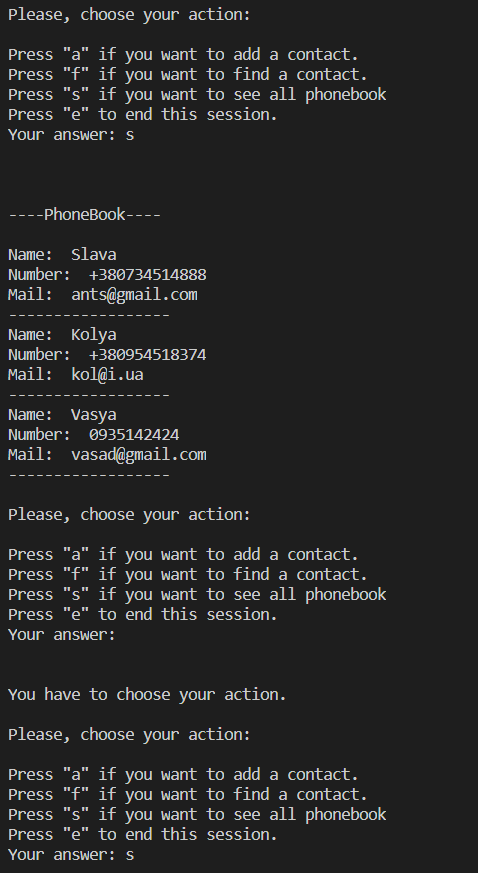
|  |  |
| --- | --- |
| **from l10\_classes import PhoneNumber** |  |
|  |  |
|  | **def new\_contact(i):** |
|  | **try:** |
|  | **print("If you don't enter a parameter, it will be saved as \"None\"")** |
|  | **nm = input("Please, print the name of this contact: ")** |
|  | **num = input("Please, print the number of this contact: ")** |
|  | **mail = input("Please, print the mail of this contact: ")** |
|  | **for i in num:** |
|  | **if i.isdigit() or (num.index("+") == 0):** |
|  | **continue** |
|  | **res = PhoneNumber(nm, num, mail)** |
|  | **return res** |
|  |  |
|  | **except ValueError:** |
|  | **print("You have to enter a phone number only with digits\n(you can also begin a phone number with \"+\")\n")** |
|  | **new\_contact(i)** |
|  |  |
|  | **def search\_contact(book):** |
|  | **print("If you don't want to input key, just press \"Enter\"")** |
|  |  |
|  | **key\_name = input("Enter a name key: ")** |
|  | **key\_num = input("Enter a number key: ")** |
|  | **key\_mail = input("Enter a name key: ")** |
|  |  |
|  | **print("Results of search:\n----------")** |
|  | **for i in book:** |
|  | **if (key\_name in i.name) and (key\_num in i.number) and (key\_mail in i.mail):** |
|  | **i.display\_info()** |
|  | **print("----------")** |
|  |  |
|  |  |
|  |  |
|  | **def menu(contact\_book, i = 0):** |
|  | **print("\nPlease, choose your action:\n")** |
|  | **print("Press \"a\" if you want to add a contact.")** |
|  | **print("Press \"f\" if you want to find a contact.")** |
|  | **print("Press \"s\" if you want to see all phonebook")** |
|  | **print("Press \"e\" to end this session.")** |
|  |  |
|  | **ans = str(input("Your answer: ")).lower()** |
|  | **print("\n")** |
|  |  |
|  | **if ans == "a":** |
|  | **contact\_book.append(new\_contact(i))** |
|  | **menu(contact\_book, i)** |
|  | **print("Contact was added.")** |
|  | **elif ans == "f":** |
|  | **search\_contact(contact\_book)** |
|  | **menu(contact\_book, i)** |
|  | **elif ans == "s":** |
|  | **print("\n----PhoneBook----\n")** |
|  | **for i in contact\_book:** |
|  | **k = i** |
|  | **k.display\_info()** |
|  | **print("------------------")** |
|  | **menu(contact\_book, i)** |
|  | **elif ans == "e":** |
|  | **raise SystemExit(0)** |
|  | **else:** |
|  | **print("You have to choose your action.")** |
|  | **menu(contact\_book, i)** |

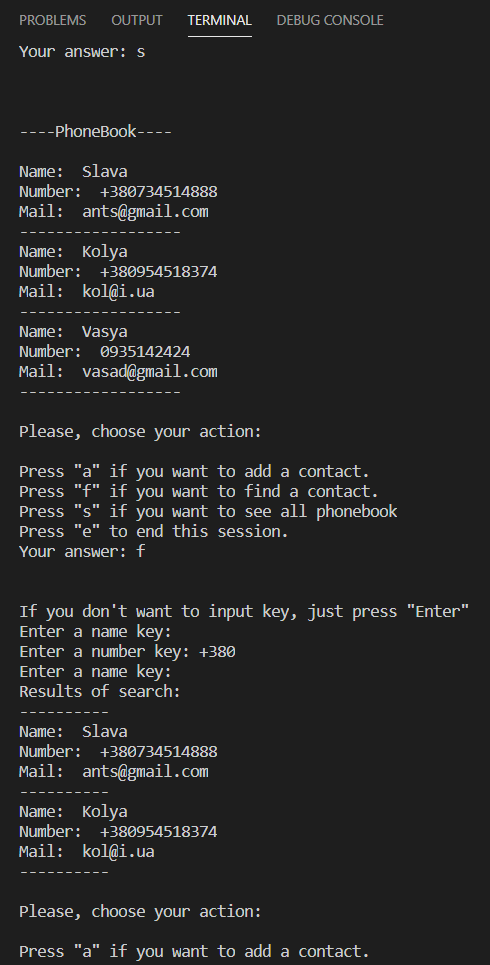
**lab\_10.py**

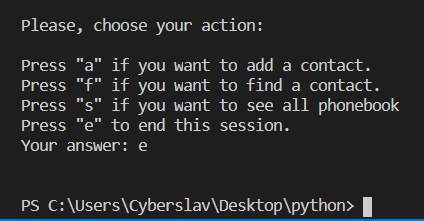
|  |  |
| --- | --- |
| **import l10\_funcs as l10** |  |
|  |  |
|  | **def main():** |
|  | **book = list()** |
|  | **print("Welcome to the early access of the PhoneBook.\n")** |
|  | **l10.menu(book)** |
|  |  |
|  |  |
|  | **if \_\_name\_\_ == "\_\_main\_\_":** |
|  | **main()** |

**Приклад виконання**

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