PISA TEST PRACTICE DOCUMENTATION

By Imanol González – January 24th 2023

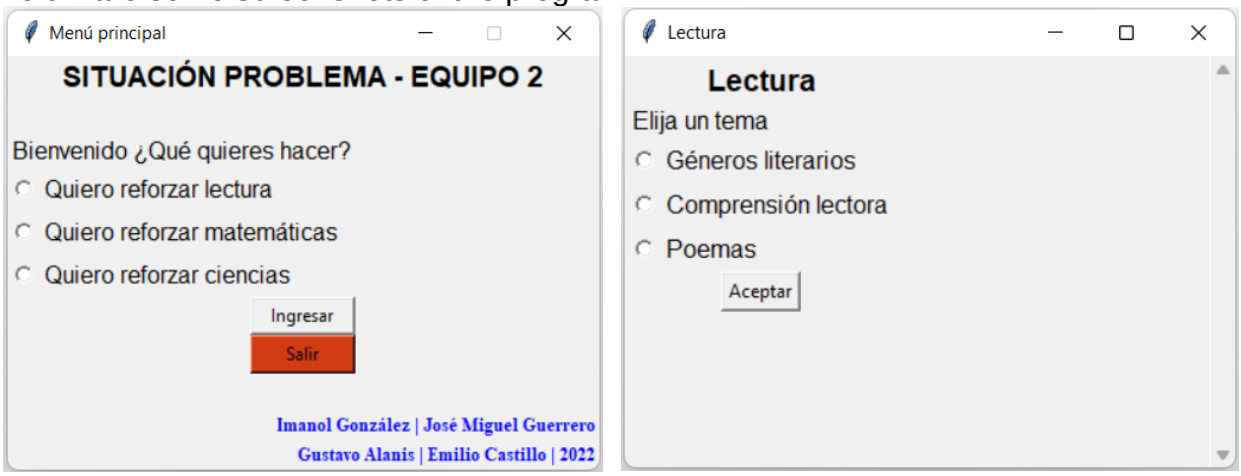
Note: The project is made in Spanish

The PISA test practice was a project part of the subject TC1028 Computational Thinking for Engineering and it was made by the following people:

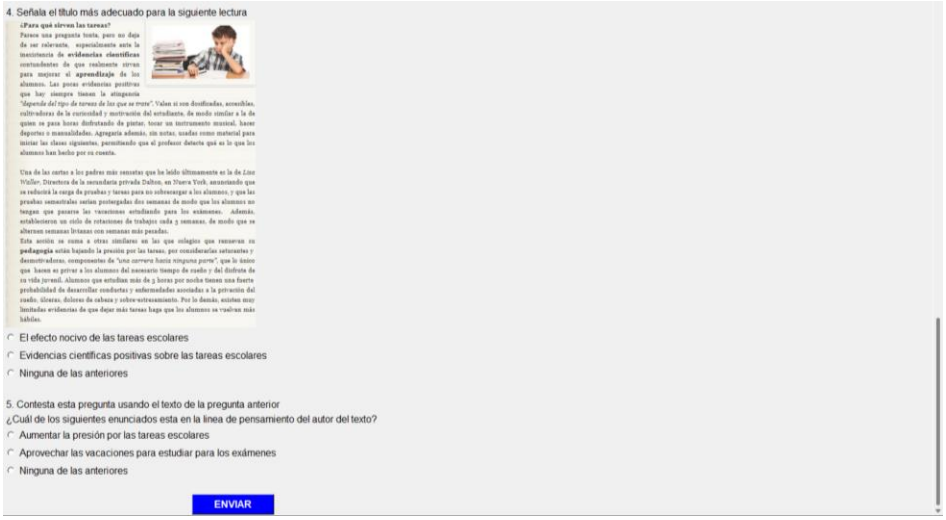
- Imanol Armando González Solís (me)
- José Miguel Guerrero Jiménez
- Gustavo Adrián Alanis Elizondo
- Emilio Castillo De la Garza

We developed a program that works as a practice resource for the PISA test. To achieve that goal we used the Tkinter and pillow libraries from python to make a graphic interface in which the user can practice taking multiple-choice exams where their performance in various subjects is graded.

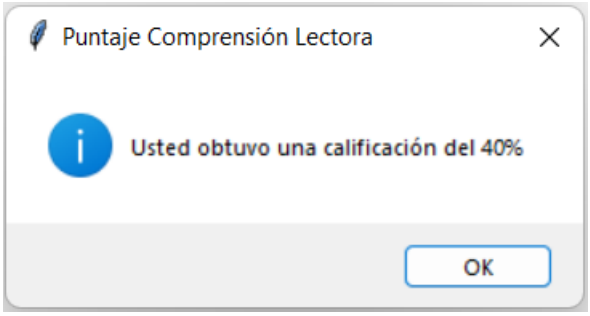
Below are some screenshots of the program:



Main menu / Selection menu of the topic to practice



Questions in the “Comprensión Lectora” Section



Score window

CODE EXPLANATION

```
7   # Creation of the main window
8   ventana = Tk()
9   ventana.title("Menú principal")
10  ventana.geometry("400x280")
11  ventana.resizable(False,False)
```

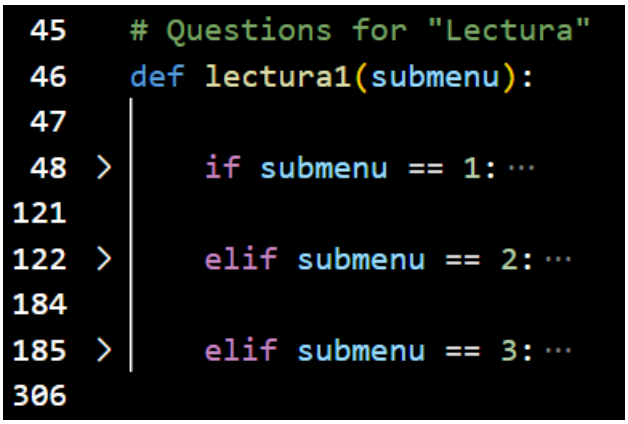
Creation of the window using Tkinter Library

```
13  # Function to print a text on the UI
14  def imprimir(ventanan,texto):
15      Label(ventanan,text=texto, font=("Arial",12)).pack(anchor=W)
```

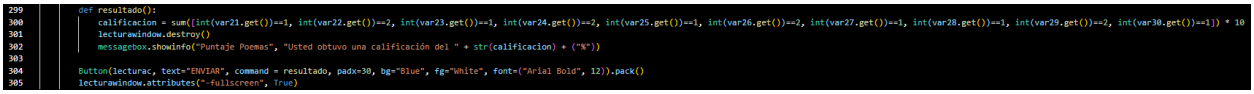
Function that we use to print in the interface easily

```
17  # Window for "Lectura"
18  def lectura():
19      global lecturawindow
20      menu = IntVar()
21      lecturawindow = Toplevel(ventana)
22      lecturawindow.title("Lectura")
23
24      # Scrollbar for "Lectura"
25      global lecturac
26      lecturaframe = Frame(lecturawindow)
27      lecturaframe.pack(fill=BOTH, expand=1)
28      lectura_canvas = Canvas(lecturaframe)
29      lectura_canvas.pack(side=LEFT, fill=BOTH, expand=1)
30      lectura_scrollbar = ttk.Scrollbar(lecturaframe, orient=VERTICAL, command=lectura_canvas.yview)
31      lectura_scrollbar.pack(side=RIGHT, fill=Y)
32      lectura_canvas.configure(yscrollcommand=lectura_scrollbar.set)
33      lectura_canvas.bind('<Configure>', lambda e: lectura_canvas.configure(scrollregion = lectura_canvas.bbox("all")))
34      lecturac = Frame(lectura_canvas)
35      lectura_canvas.create_window((0,0), window=lecturac, anchor="nw")
36
37      # Options for "Lectura"
38      Label(lecturac, text="Lectura", font=("Arial Bold", 14)).pack()
39      Label(lecturac, text="Elija un tema", font=("Arial", 12)).pack(anchor=W)
40      Radiobutton(lecturac, text="Géneros literarios", font=("Arial", 12), variable=menu, value=1).pack(anchor=W)
41      Radiobutton(lecturac, text="Comprensión lectora", font=("Arial", 12), variable=menu, value=2).pack(anchor=W)
42      Radiobutton(lecturac, text="Poemas", font=("Arial", 12), variable=menu, value=3).pack(anchor=W)
43      Button(lecturac, text="Aceptar", command = lambda: lectura1(menu.get())).pack()
```

Window that appears when selecting one of the 3 main options, for this particular case the “Lectura” one. Then for adding the Scrollbar we created a canvas where all the elements of the window are displayed



Questions for each section



Code found in each section that evaluates the score obtained, displays it in a popup window, and closes the respective section window

Find the complete project at
https://github.com/imanolgzz/Project-Portfolio/tree/main/Python/pisaTestPractice
Note: you need to install the Tkinter and Pillow libraries to run the program