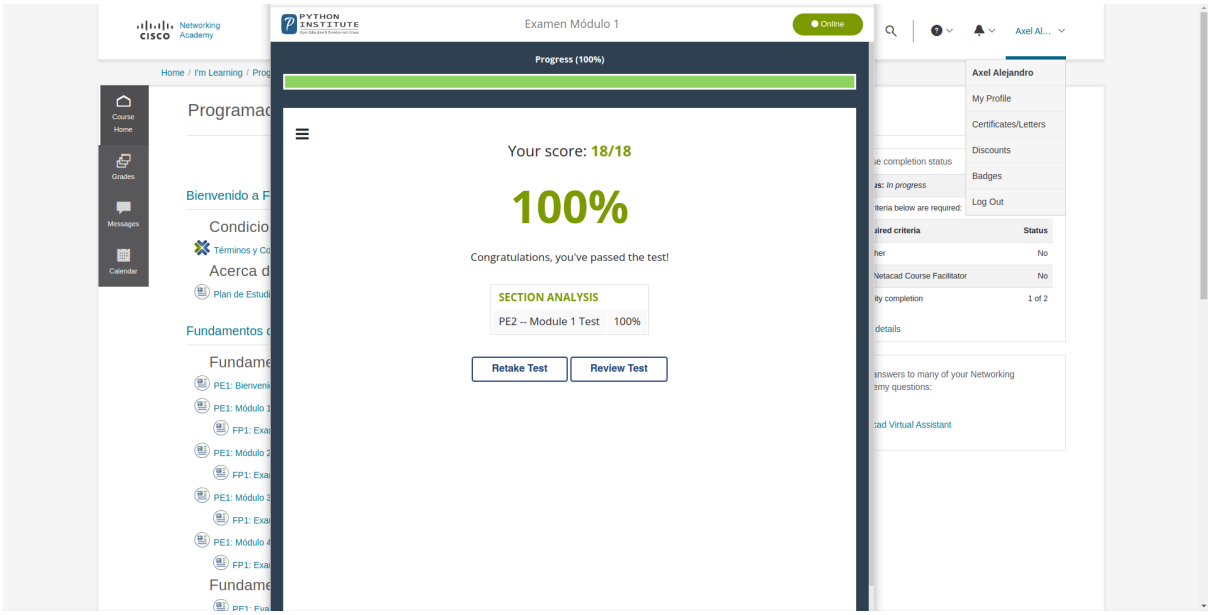
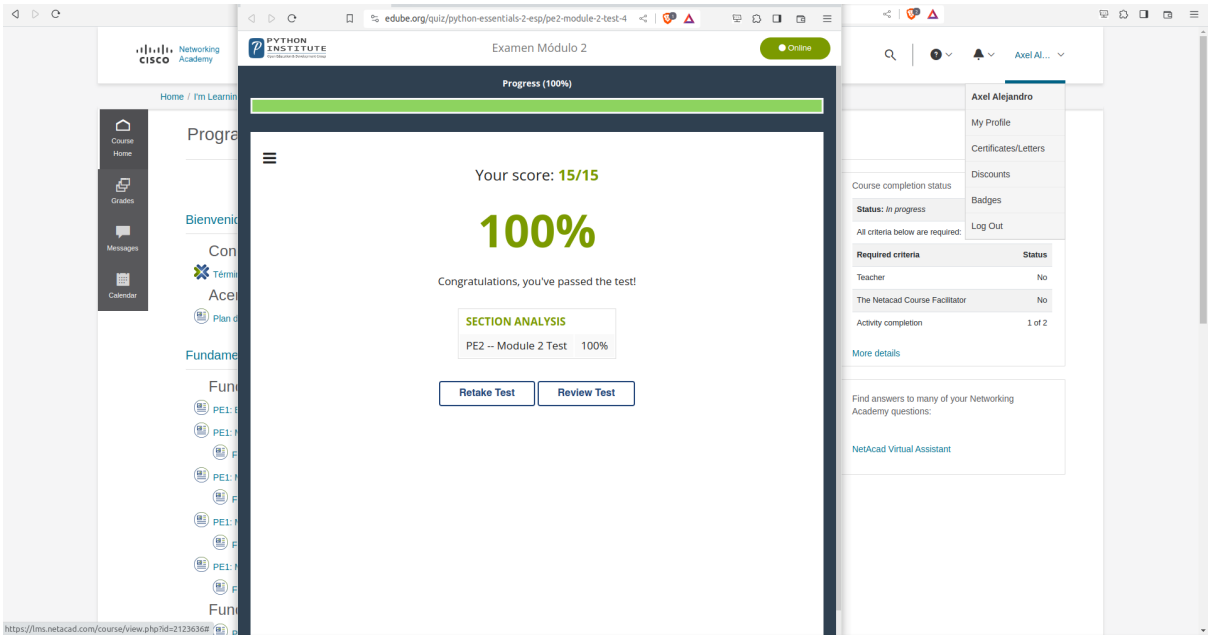
Responde a los todos los Quizes hasta obtener el 100% de las respuestas correctas, no se te olvide tomar como evidencia imagen de perfil de usuario, el nombre del archivo debe tener como nombre U1R1_Ejer21_[nombre estudiante].PDF

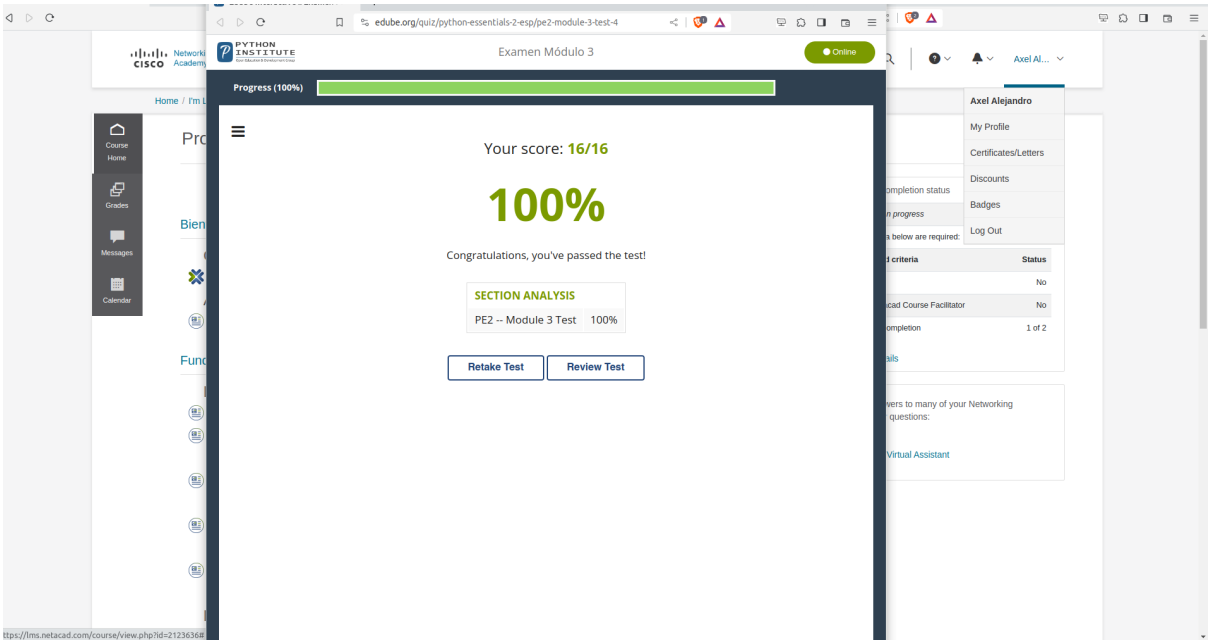
o PE2 Módulo 1 Quiz



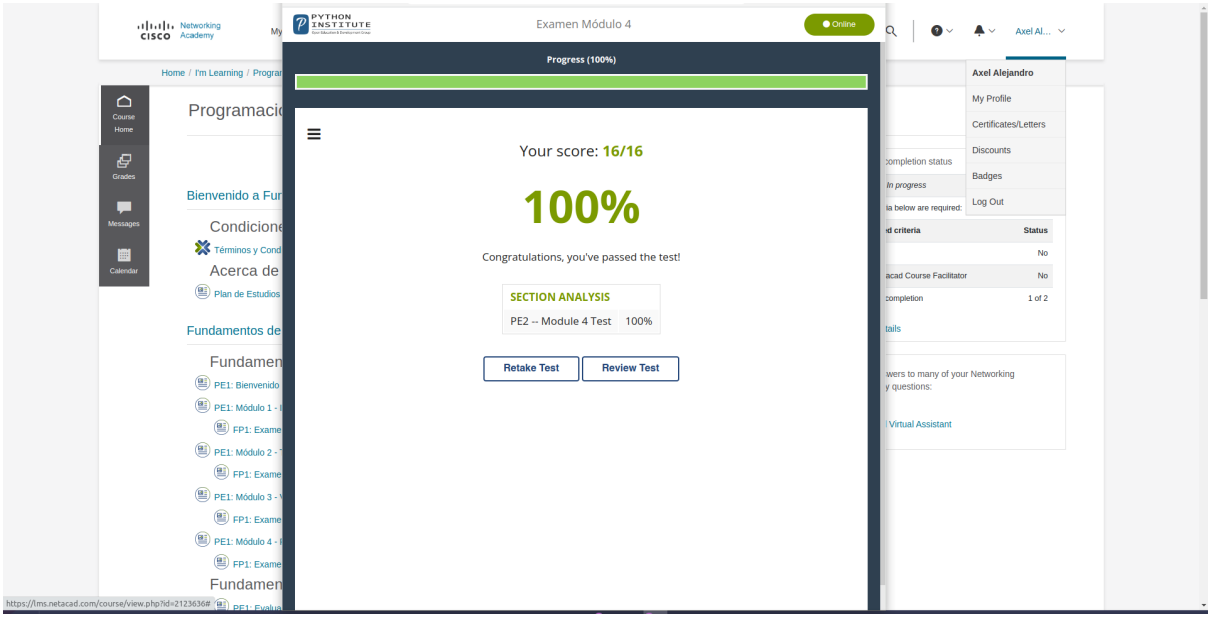
o PE2 Módulo 2 Quiz



o PE2 Módulo 3 Quiz

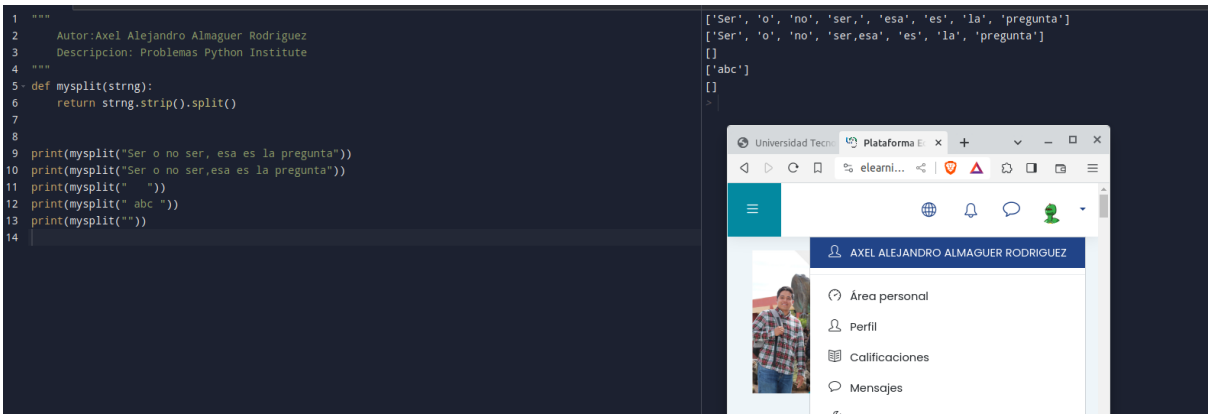


o PE2 Módulo 4 Quiz



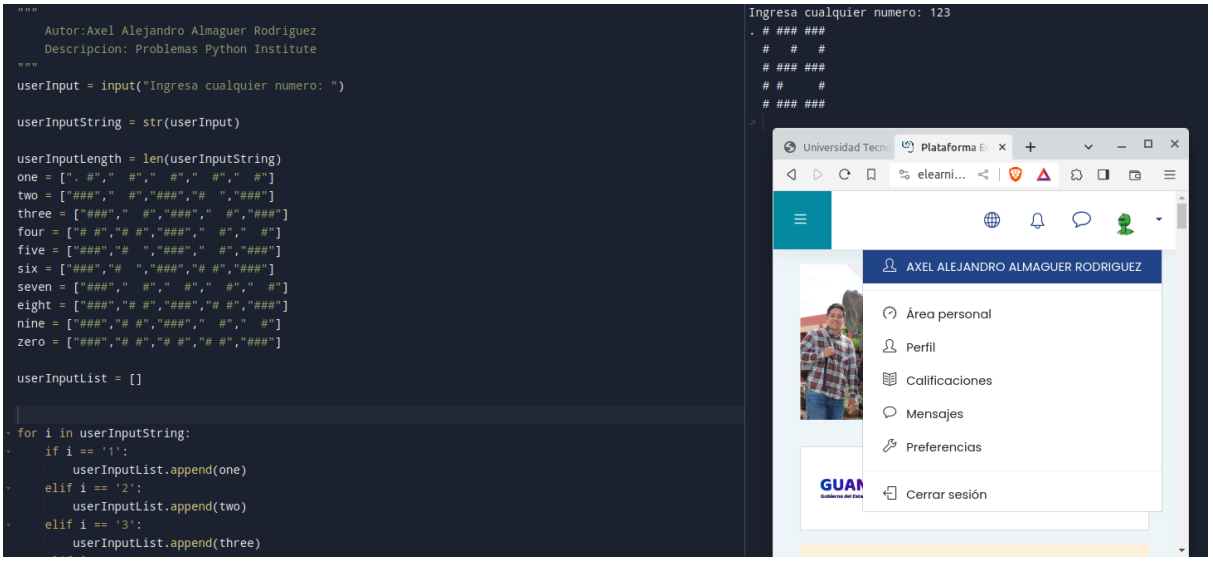
Realiza los laboratorios del módulo y documentalos

Módulo 2
o 2.3.1.18 2.4.1.16 2.8.1.4



```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
def mysplit(strng):
    return strng.strip().split()


print(mysplit("Ser o no ser, esa es la pregunta"))
print(mysplit("Ser o no ser,esa es la pregunta"))
print(mysplit("   "))
print(mysplit(" abc "))
print(mysplit(""))
```

```
['Ser', 'o', 'no', 'ser,', 'esa', 'es', 'la', 'pregunta']
['Ser', 'o', 'no', 'ser,esa', 'es', 'la', 'pregunta']
[]
['abc']
[]
```



```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
userInput = input("Ingresa cualquier numero: ")

userInputString = str(userInput)

userInputLength = len(userInputString)
one = [". #","  #","  #","  #","  #"]
two = ["###","  #","###","#  ","###"]
three = ["###","  #","###","  #","###"]
four = ["# #","# #","###","  #","  #"]
five = ["###","#  ","###","  #","###"]
six = ["###","#  ","###","# #","###"]
seven = ["###","  #","  #","  #","  #"]
eight = ["###","# #","###","# #","###"]
nine = ["###","# #","###","  #","  #"]
zero = ["###","# #","# #","# #","###"]

userInputList = []


for i in userInputString:
    if i == '1':
        userInputList.append(one)
    elif i == '2':
        userInputList.append(two)
    elif i == '3':
        userInputList.append(three)
```

```
Ingresa cualquier numero: 123
. # ### ###
  #   #   #
  # ### ###
  # #     #
  # ### ###
```

```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
def read_int(prompt, min, max):
    userInput = input(prompt)
    isUserInputValid = False
    while isUserInputValid == False:
        try:
            userInput = int(userInput)
            assert userInput > min and userInput < max
            isUserInputValid = True
        except ValueError:
            print("Error: entrada erronea")
            userInput = input(prompt)
        except AssertionError:
            print("Error: el valor no esta dentro del rango")
            userInput = input(prompt)

    return str(userInput)

v = read_int("Ingresa un numero de -10 al 10: ", -10, 10)

print("El numero es:", v)
```

```
Ingresa un numero de -10 al 10: 100
ERROR!
Error: el valor no esta dentro del rango
Ingresa un numero de -10 al 10: 1
El numero es: 1
```

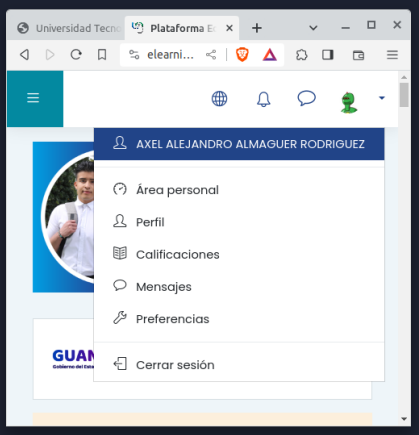
Módulo 3

o 3.2.1.14 3.2.1.15 3.2.1.16

o 3.4.1.12 3.1.4.13 3.4.1.14 3.4.1.15

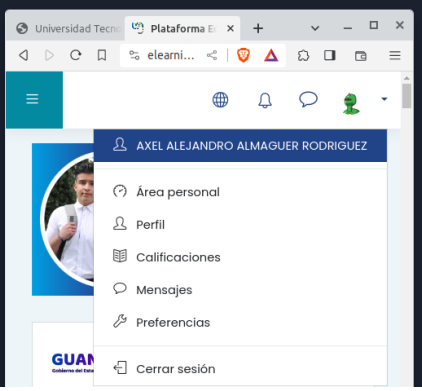
```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
class Stack:
    def __init__(self):
        self.__stk = []

    def push(self, val):
        self.__stk.append(val)

    def pop(self):
        val = self.__stk[-1]
        del self.__stk[-1]
        return val
class CountingStack(Stack):
    def __init__(self):
        #  Llena el constructor con acciones apropiadas.
        Stack.__init__(self)
        self.__counter = 0
    def get_counter(self):
        # Presenta el valor actual del contador al mundo.
        return self.__counter
    def pop(self):
        # Haz un pop y actualiza el contador.
        self.__counter += 1
        return Stack.pop(self)
stk = CountingStack()
for i in range(100):
    stk.push(i)
    stk.pop()
print(stk.get_counter())
```

```
100
>
```



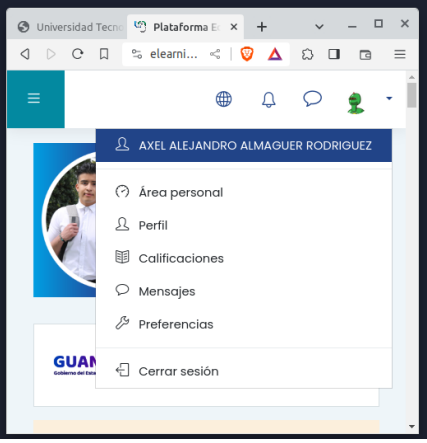

```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
class QueueError(IndexError):
    pass


class Queue:
    def __init__(self):
        self.queue = []

    def put(self, elem):
        self.queue.insert(0, elem)

    def get(self):
        if len(self.queue) > 0:
            elem = self.queue[-1]
            del self.queue[-1]
            return elem
        else:
            raise QueueError
que = Queue()
que.put(1)
que.put("perro")
que.put(False)
try:
    for i in range(4):
```

```
1
perro
False
Error de cola
>
```



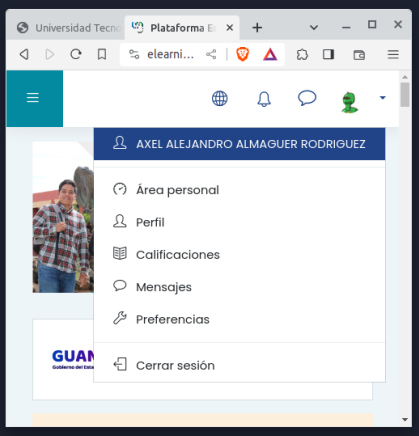

```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
class QueueError(IndexError):
    pass
class Queue:
    def __init__(self):
        self.queue = []
    def put(self,elem):
        self.queue.insert(0,elem)
    def get(self):
        if len(self.queue) > 0:
            elem = self.queue[-1]
            del self.queue[-1]
            return elem
        else:
            raise QueueError
class SuperQueue(Queue):
    def isempty(self):
        return len(self.queue) == 0
que = SuperQueue()
que.put(1)
que.put("perro")
que.put(False)
for i in range(4):
    if not que.isempty():
        print(que.get())
    else:
        print("Cola vacia")
```

```
1
perro
False
Cola vacia
>
```



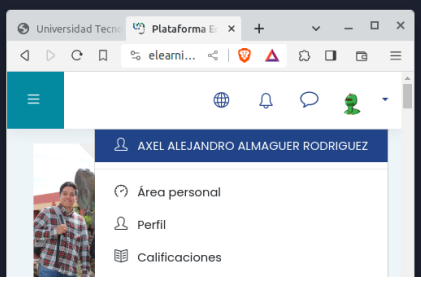
```python
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
class WeekDayError(Exception):
    pass
class Weeker:
    __names = ['Lun', 'Mar', 'Mie', 'Jue', 'Vie', 'Sab', 'Dom']
    def __init__(self, day):
        try:
            self.__current = Weeker.__names.index(day)
        except ValueError:
            raise WeekDayError
    def __str__(self):
        return Weeker.__names[self.__current]

    def add_days(self, n):
        self.__current = (self.__current + n) % 7

    def subtract_days(self, n):
        self.__current = (self.__current - n) % 7
try:
    weekday = Weeker('Lun')
    print(weekday)
    weekday.add_days(15)
    print(weekday)
    weekday.subtract_days(23)
    print(weekday)
    weekday = Weeker('Lun')
except WeekDayError:
    print('Lo siento, no puedo atender tu solicitud.')
```

```
Lun
Mar
Dom
>
```



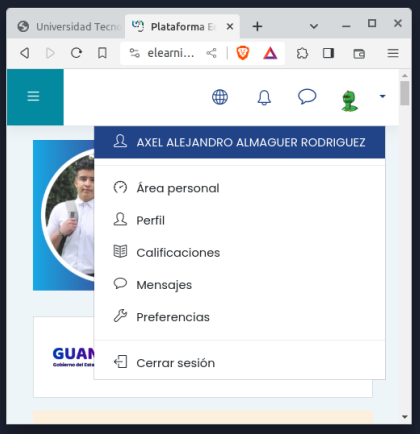

```python
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
import math
class Point:
    def __init__(self, x=0.0, y=0.0):
        self.x = x
        self.y = y
    def getx(self):
        return self.x
    def gety(self):
        return self.y
    def distance_from_xy(self, x, y):
        return math.sqrt((self.y-y)**2+(self.x-x)**2)
    def distance_from_point(self, point):
        return math.sqrt((self.y-point.y)**2+(self.x-point.x)**2)
point1 = Point(0, 0)
point2 = Point(1, 1)
print(point1.distance_from_point(point2))
print(point2.distance_from_xy(2, 0))
```

```
1.4142135623730951
1.4142135623730951
>
```




```python
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
import math
class Point:
    def __init__(self, x=0.0, y=0.0):
        self.x = x
        self.y = y
    def getx(self):
        return self.x
    def gety(self):
        return self.y
    def distance_from_xy(self, x, y):
        return math.sqrt((self.y-y)**2+(self.x-x)**2)
    def distance_from_point(self, point):
        return math.sqrt((self.y-point.y)**2+(self.x-point.x)**2)
class Triangle:
    def __init__(self, vertice1, vertice2, vertice3):
        self.a = vertice1
        self.b = vertice2
        self.c = vertice3
    def perimeter(self):
        return (
            self.a.distance_from_point(self.b) +
            self.b.distance_from_point(self.c) +
            self.a.distance_from_point(self.c)
        )
triangle = Triangle(Point(0, 0), Point(1, 0), Point(0, 1))
print(triangle.perimeter())
```

```
3.414213562373095
>
```



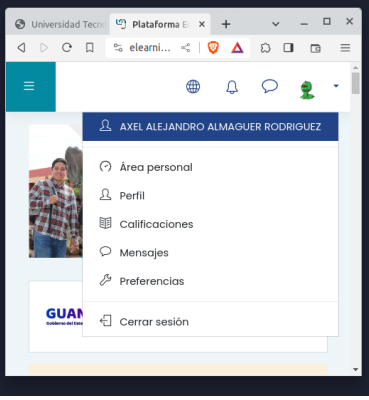
Módulo 4

4.3.1.15 4.3.1.16 4.3.1.17 4.4.1.8 4.5.1.22

o 4.6.1.13

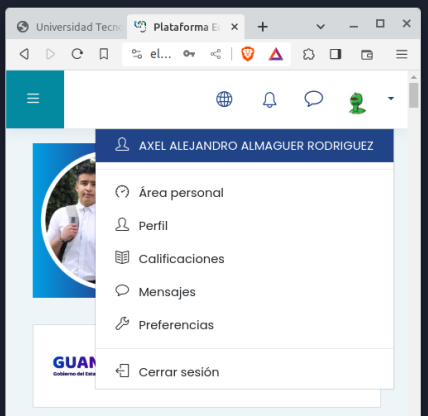
```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
from os import strerror
filename = input("¿Cual es el nombre del archivo? ")
try:
    file = open(filename, 'r')
except IOError as e:
    print("No se puede abrir.", strerror(e.errno))
    exit()
store = {}
count = 0
read = file.read()
for char in read:
    if char.isalpha() == True:
        if char not in store.keys():
            count = 1
            store.update({char.lower(): count})
        else:
            count += 1
            store.update({char.lower(): count})
clean_name = filename.split('.')[0]
output = open(clean_name + '.hist', 'w+t')
newstore = {}

for key, value in sorted(store.items(), key=lambda x: x[1], reverse=True):
    output.write(str(key) + ' --> ' + str(value) + '\n')

file.close()
output.close()
```

```
A module you have imported isn't available at the moment. It will be available soon.
>
```



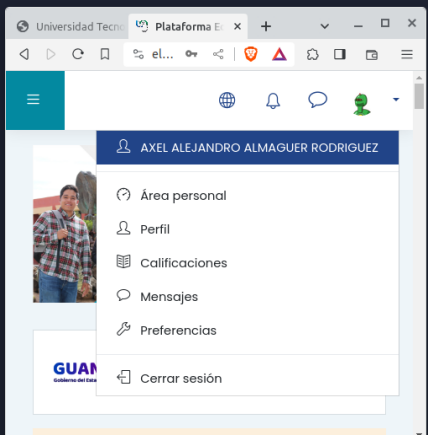

```
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
from collections import defaultdict

def generar_histograma(archivo):
    recuento_letras = defaultdict(int)

    try:
        with open(archivo, 'r') as file:
            contenido = file.read()

        for caracter in contenido:
            if caracter.isalpha():
                letra = caracter.lower()
                recuento_letras[letra] += 1

        ordenado = sorted(recuento_letras.items(), key=lambda x: x[1], reverse=True)

        for letra, recuento in ordenado:
            print(f"{letra} -> {recuento}")

        nombre_archivo_salida = archivo.split('.')[0] + '.hist'
        with open(nombre_archivo_salida, 'w') as output_file:
            for letra, recuento in ordenado:
                output_file.write(f"{letra} -> {recuento}\n")

        print(f"Histograma guardado en {nombre_archivo_salida}")
```

```
a -> 3
b -> 2
c -> 1
Histograma guardado en samplefile.hist
>
```



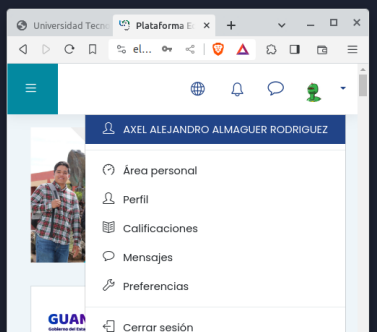

```
hain.py
Save
Run
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""

class WrongLine(Exception):
    def __init__(self, line):
        self.line = line

class FileEmpty(Exception):
    pass

def main():
    try:
        filename = input("Introduce el nombre del archivo: ")
        students = {}
        with open(filename, "r") as f:
            for line in f:
                line = line.strip()
                if len(line.split()) != 3:
                    raise WrongLine(line)
                student, lastname, points = line.split()
                if student not in students:
                    students[student] = 0
                students[student] += float(points)
        if not students:
            raise FileEmpty
        else:
            for student, points in students.items():
                print(f"{student}: {points}")
```

```
Shell
Introduce el nombre del archivo: Estudiantes
El archivo no existe
>
```



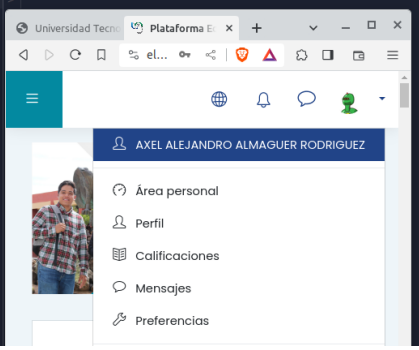
```python
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
import os
def find(path, dir):
    if not os.path.exists(path):
        print("El directorio dado no existe.")
        return
    for root, dirs, files in os.walk(path):
        if dir in dirs:
            print(os.path.join(root, dir))

path = "./tree"
dir = "python"

find(path, dir)
```

```
A module you have imported isn't available at the moment. It will be available soon.
>
```




```python
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
from datetime import datetime
dt = datetime(2020,11,4,14,53,0)

print(dt)
print(dt.strftime('%y/%B/%d %H:%M:%S %p'))
print(dt.strftime('%a, %Y %b %d'))
print(dt.strftime('%A, %Y %B %d'))
print('Semana: ' + str(dt.weekday() + 1))
print('Dia del año: ' + dt.strftime('%j'))
print('Numero de semana del año: ' + dt.strftime('%W'))
```

```
2020-11-04 14:53:00
20/November/04 14:53:00 PM
Wed, 2020 Nov 04
Wednesday, 2020 November 04
Semana: 3
Dia del año: 309
Numero de semana del año: 44
>
```




```python
"""
    Autor:Axel Alejandro Almaguer Rodriguez
    Descripcion: Problemas Python Institute
"""
import calendar
class Calendar:
    pass
class MyCalendar(Calendar):
    def __init__(self):
        Calendar.__init__(self)
    def __str__(self, result):
        print(str(result))
    def count_weekday_in_year(self, year, weekday):
        y = year
        wd = weekday
        cal = calendar.Calendar()
        weekday_counter = 0
        for month in range(12):
            month += 1
            for week in cal.monthdays2calendar(y, month):
                for day in week:
                    if day[1] == wd and day[0] != 0:
                        weekday_counter += 1
        self.__str__(weekday_counter)
obj = MyCalendar()
obj.count_weekday_in_year(2000, 6)
```

```
53
>
```