PsyAnalyser

Release 0.0.1

Sofiia Myntiuk

May 19, 2020

Table of Contents

Python Module Index 9

Index 11

The main module of the program. Contains analysis of data from databases and API.

modules.analysis.**analyse_students_merge** (*path*, *ukrainian*)
str, list -> plotly line graphs Merges data from API and data from databases to analyse students' depression, doctor and suicide parameters.

modules.analysis.**analyse_suicide_by_age** (*path*)
str -> plotly line graphs Analyses middle death from suicide age in different years.

modules.analysis.**analyse_ukrainian** (*ukrainian_analyser*)
PsyStudentAnalyser -> plotly diagrams. Returns pie and line diagrams for possible parameters of ukrainian students.

modules.analysis.**analyser_ukrainian_students** (*ukrainian*)
list -> PsyStudentAnalyser Returns Analyser to analyse Ukrainian students mental health.

modules.analysis.**count_resp** (*data*)
dict -> dict Counts sum of respondents in particular year.

modules.analysis.**create_web** ( )
Creates and returns web application to run.

modules.analysis.**get_countries_data** (*path_percent*, *path_total*, *col*)
str, str, str -> plotly diagram Returns line diagram based on files that contain name of the country, percent of people suffering from d/o's and total population of the country for every year.

modules.analysis.**get_from_google_sheets** (*sheets*)
list -> list Returns list of responses from all the workplaces listed.

Contains implementation of Person, Student and Student classes. Student is inherited from Person,

class modules.people.**Person** (*age*, *depression=0*, *suicide=0*, *anxiety=0*, *doctor=0*)
Representation of the Person. The class is needed to work with AgeGroup class.

property age
(Person) -> int Returns age of the person.

Returns __age parameter.

property anxiety
(Person) -> bool Returns 1 if person have anxiety disorders and 0 otherwise. :return: __anxiety

parameter.

property depression
(AgeGroup) -> int Returns 1 id person have depressive disorders and 0 otherwise. :return: __depression parameter.

property doctor
(Person) -> int Returns 1 if Person visited a doctor and 0 otherwise.

Returns __doctor parameter.

property suicide
(Person) -> bool Returns 1 if person had suicide attempts and 0 otherwise.

Returns __suicide parameter.

class modules.people.**Student** (*age*, *depression=0*, *anxiety=0*, *suicide=0*, *doctor=0*, *study=0*, *suicidal_thoughts=0*, *self_harm=0*, *dep_diagnosed=0*, *behavior=0*, *anx_diagnosed=0*, *list_dep=[]*, *list_anx=[]*)
Representation of the Student, who is Person, but has additional parameters.

property anx_diagnosed
(Student) -> int Returns True if student have diagnosed anxiety disorder and False otherwise.

Returns __anx_diagnosed parameter.

property behavior
(Student) -> int Returns True if student have changed their plans or (and) behavior because of anxiety and False otherwise.

Returns __behavior parameter.

property dep_diagnosed
(StudentGroup) -> int Returns True if student have diagnosed depressive disorder and False otherwise.

Returns __dep_diagnosed parameter.

property self_harm
(Student) -> int Returns True if student practiced self-harm and False otherwise.

Returns __self_harm parameter.

property study
(Student) -> int Returns True if student assume that study decreased level of their mental health and False otherwise.

Returns __study parameter.

property suicidal_thoughts
(Student) -> int Returns 1 if student had suicidal thoughts and 0 otherwise.

Returns __suicidal_thoughts parameter.

property suicide
(Student) -> int Returns True if student had suicide attempts and False otherwise.

Returns __suicide parameter.

modules.people.**test_input** (*value*)
int -> int Returns value if it is correct and 0 otherwise. :param value: value to check. :param value:

:return:

Contains implementation of AgeGroup class.

class modules.agegroup.**AgeGroup** (*age=0*, *suicide=0*, *suicide_resp=0*, *depression=0*, *depression_resp=0*, *anxiety=0*, *anxiety_resp=0*)

Represents age group. Every age group contains age (years) and counters for suicides, depression and anxiety disorders that people of this age have. For every of described parameter there are number of respondents that took part in questionnaire, if needed.

add_person (*person*)

(AgeGroup, Person) -> NoneType Adds person parameters to parameters of the group.

Parameters **person** – person to add to group.
Returns

property age

(AgeGroup) -> int Returns age parameter of the AgeGroup object.

property anxiety

(AgeGroup) -> int Returns number of people in AgeGroup suffering from anxiety disorders. :return: __anxiety parameter.

property anxiety_resp

(AgeGroup) -> int Returns number of total number of respondents to anxiety questionnaire in AgeGroup. :return: __anxiety_resp parameter.

property depression

(AgeGroup) -> int Returns number of people in AgeGroup suffering from depression. :return: __depression parameter.

property depression_resp

(AgeGroup) -> int Returns number of total number of respondents to depression questionnaire in AgeGroup. :return: __depression_resp parameter.

merge (*other*)

(AgeGroup, AgeGroup) -> 0 Merges two AgeGroup objects by summarizing parameters' values to self. :param other: AgeGroup to merge with. :return:

property suicide

(AgeGroup) -> int Returns number of suicides committed by AgeGroup. :return: __suicide parameter.

property suicide_resp

(AgeGroup) -> int Returns number of total number of respondents to suicide questionnaire in AgeGroup. :return: __suicide_resp parameter.

modules.agegroup.**test_input** (*value*)

int -> int Returns value if it is correct and 0 otherwise. :param value: value to check.

Contains implementation of StudentGroup class. StudentGroup class is inherited from AgeGroup.

class modules.studentgroup.**StudentGroup** (*age*, *depression=0*, *anxiety=0*, *suicide=0*, *study=0*, *suicidal_thoughts=0*, *self_harm=0*, *dep_diagnosed=0*, *behavior=0*, *anx_diagnosed=0*, *doctor=0*, *total=0*, *list_dep=[]*, *list_anx=[]*)

Representation of StudentGroup, which is AgeGroup, but has additional parameters.

add_person (*person*)
(StudentGroup, Person) -> NoneType :return:

property anx_diagnosed
(StudentGroup) -> int Returns number of students who have diagnosed anxiety disorder.

Returns __anx_diagnosed parameter.

property behavior
(StudentGroup) -> int Returns number of students who have changed their plans or (and) behavior because of anxiety.

Returns __behavior parameter.

property dep_diagnosed
(StudentGroup) -> int Returns number of students who have diagnosed depressive disorder.

Returns __dep_diagnosed parameter.

property doctor
(StudentGroup) -> int Returns number of students who have visited a doctor.

Returns __doctor parameter.

merge (*other*)
StudentGroup, StudentGroup -> NoneType Merges two AgeGroup objects by summarizing parameters' values to self. :param other: AgeGroup to merge with. :return:

property self_harm
(StudentGroup) -> int Returns number of students who practiced self-harm.

Returns __self_harm parameter.

property study
(StudentGroup) -> int Returns number of students who assume that study decreased level of their mental health.

Returns __study parameter.

property suicidal_thoughts
(StudentGroup) -> int Returns number of students who had suicidal_thoughts.

Returns __suicidal_thoughts parameter.

property suicide
(StudentGroup) -> int Returns number of students who had suicide attempts.

Returns __suicide parameter.

property total
(StudentGroup) -> int Returns total number of students.

Returns __total parameter.

Contains implementation of PsyAnalyser class. It simplifies work with AgeGroup and StudentGroup objects.

class modules.psyanalyser.**PsyAnalyser** (*year=None*)
Representation of PsyAnalyser.

add_group (*group*)
(Analyser, AgeGroup) -> NoneType Adds group to dictionary of groups, so that its structure is age: AgeGroup. If group of given age already exists, it changes it.

Parameters **group** – age group to add to the dictionary.
Returns

add_person (*person*)
(Analyser, Person) -> NoneType Adds person to dictionary by adding their parameters to the corresponding dictionary value. I such an AgeGroup doesn't exist, creates new AgeGroup based on the person.

Parameters **person** – Person object to add.
Returns

get_anxiety ( )
PsyAnalyser -> ResponseList Returns percents of people suffering from anxiety d/o in each age group.

get_depression ( )
PsyAnalyser -> ResponseList Returns percents of people suffering from depressive d/o in each age group.

get_suicide ( )
PsyAnalyser -> ResponseList Returns percents of people who had suicide attempts in each age group.

property **groups**
(Analyser) -> dict Returns groups from the PsyAnalyser object

Returns value of __groups parameter

Contains implementation of Analyser class, which is inherited from PsyAnalyser class. It simplifies work with StudentGroup objects.

class modules.psystudentanalyser.**PsyStudentAnalyser**
Student Analyser representation. Is Analyser, but with wider options.

add_person (*person*)
(Analyser, Person) -> NoneType Adds person to dictionary by adding their parameters to the corresponding dictionary value. I such an StudentGroup doesn't exist, creates a new one based on the person.

Parameters **person** – Person object to add.
Returns

get_anx_diagnosed ( )
PsyAnalyser, bool -> ResponseList Returns percent of people who have been diagnosed with anxiety d/o.

get_anxiety ( )
PsyAnalyser -> ResponseList Returns percents of people suffering from anxiety d/o in each age group.

get_behavior ( )
PsyAnalyser, bool -> ResponseList Returns percent of people who have changed their behavior

and/or plans because of anxiety.

get_dep_diagnosed ( )
PsyAnalyser, bool -> ResponseList Returns percent of people who have been diagnosed with depressive d/o.

get_depression ( )
PsyAnalyser -> ResponseList Returns percents of people suffering from depressive d/o in each age group.

get_doctor ( )
PsyAnalyser, bool -> ResponseList Returns percents of people who had visited a therapist in each age group.

get_list_anx ( )
PsyAnalyser -> ResponseList Returns prevalence of each anxiety d/o.

get_list_dep ( )
PsyAnalyser -> ResponseList Returns prevalence of each depressive d/o.

get_self_harm ( )
PsyAnalyser, bool -> ResponseList Returns percent of people who practice(d) self-harm.

get_study ( )
PsyAnalyser, bool -> ResponseList Returns percent of people who think studying negatively affected their mental health.

get_suicidal_thoughts ( )
PsyAnalyser, bool -> ResponseList Returns percent of people who had/have suicidal thoughts.

get_suicide ( )
PsyAnalyser -> ResponseList Returns percents of people who had suicide attempts in each age group.

Contains implementation of ResponseList ADT and Response class.

class modules.responselist.**Response** (*x=0*, *y=0*)
Representation of the Response, which is a pair of numbers. The first number is value of x and the second one is value of y, so that data is ready to be plotted.

get_df_for_pie ( )
Response -> list Returns data from Response so that it can easily be turned into a pandas data frame to plot pie diagram.

property value_x
Response -> int/str Returns value of value_x parameter.

property value_y
Response -> int/float Returns value of value_y parameter.

class modules.responselist.**ResponseList**
ResponseList ADT implementation based on linked list.

get_df_for_line (*year=None*)
ResponseList -> list Returns data from ResponseList so that it can easily be turned into a pandas

data frame to plot line graph.

property head
ResponseList -> Response :return: _head value.

- *Index*
- *Module Index*
- *Search Page*

m

modules
    modules.agegroup, ??
    modules.analysis, ??
    modules.people, ??
    modules.psyanalyser, ??
    modules.psystudentanalyser, ??
    modules.responselist, ??
    modules.studentgroup, ??

A

add_group() (modules.psyanalyser.PsyAnalyser method), 5
add_person() (modules.agegroup.AgeGroup method), 3
add_person() (modules.psyanalyser.PsyAnalyser method), 5
add_person() (modules.psystudentanalyser.PsyStudentAnalyser method), 5
add_person() (modules.studentgroup.StudentGroup method), 4
age() (modules.agegroup.AgeGroup property), 3
age() (modules.people.Person property), 1
AgeGroup (class in modules.agegroup), 3
analyse_students_merge() (in module modules.analysis), 1
analyse_suicide_by_age() (in module modules.analysis), 1
analyse_ukrainian() (in module modules.analysis), 1
analyser_ukrainian_students() (in module modules.analysis), 1
anx_diagnosed() (modules.people.Student property), 2
anx_diagnosed() (modules.studentgroup.StudentGroup property), 4
anxiety() (modules.agegroup.AgeGroup property), 3
anxiety() (modules.people.Person property), 1
anxiety_resp() (modules.agegroup.AgeGroup property), 3

B

behavior() (modules.people.Student property), 2
behavior() (modules.studentgroup.StudentGroup property), 4

C

count_resp() (in module modules.analysis), 1
create_web() (in module modules.analysis), 1

D

dep_diagnosed() (modules.people.Student property), 2
dep_diagnosed() (modules.studentgroup.StudentGroup property), 4
depression() (modules.agegroup.AgeGroup property), 3
depression() (modules.people.Person property), 2
depression_resp() (modules.agegroup.AgeGroup property), 3
doctor() (modules.people.Person property), 2
doctor() (modules.studentgroup.StudentGroup property), 4

G

get_anx_diagnosed() (modules.psystudentanalyser.PsyStudentAnalyser method), 5
get_anxiety() (modules.psyanalyser.PsyAnalyser method), 5
get_anxiety() (modules.psystudentanalyser.PsyStudentAnalyser method), 5
get_behavior() (modules.psystudentanalyser.PsyStudentAnalyser method), 5
get_countries_data() (in module modules.analysis), 1
get_dep_diagnosed() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_depression() (modules.psyanalyser.PsyAnalyser method), 5
get_depression() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_df_for_line() (modules.responselist.ResponseList method), 6

get_df_for_pie() (modules.responselist.Response method), 6
get_doctor() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_from_google_sheets() (in module modules.analysis), 1
get_list_anx() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_list_dep() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_self_harm() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_study() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_suicidal_thoughts() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
get_suicide() (modules.psyanalyser.PsyAnalyser method), 5
get_suicide() (modules.psystudentanalyser.PsyStudentAnalyser method), 6
groups() (modules.psyanalyser.PsyAnalyser property), 5

H

head() (modules.responselist.ResponseList property), 7

M

merge() (modules.agegroup.AgeGroup method), 3
merge() (modules.studentgroup.StudentGroup method), 4
module
    modules.agegroup, 3
    modules.analysis, 1
    modules.people, 1
    modules.psyanalyser, 4
    modules.psystudentanalyser, 5
    modules.responselist, 6
    modules.studentgroup, 3
modules.agegroup
    module, 3
modules.analysis
    module, 1
modules.people
    module, 1
modules.psyanalyser
    module, 4
modules.psystudentanalyser
    module, 5
modules.responselist
    module, 6
modules.studentgroup
    module, 3

P

Person (class in modules.people), 1
PsyAnalyser (class in modules.psyanalyser), 4
PsyStudentAnalyser (class in modules.psystudentanalyser), 5

R

Response (class in modules.responselist), 6
ResponseList (class in modules.responselist), 6

S

self_harm() (modules.people.Student property), 2
self_harm() (modules.studentgroup.StudentGroup property), 4
Student (class in modules.people), 2
StudentGroup (class in modules.studentgroup), 3
study() (modules.people.Student property), 2
study() (modules.studentgroup.StudentGroup property), 4
suicidal_thoughts() (modules.people.Student property), 2
suicidal_thoughts() (modules.studentgroup.StudentGroup property), 4
suicide() (modules.agegroup.AgeGroup property), 3
suicide() (modules.people.Person property), 2
suicide() (modules.people.Student property), 2
suicide() (modules.studentgroup.StudentGroup property), 4
suicide_resp() (modules.agegroup.AgeGroup property), 3

T

test_input() (in module modules.agegroup), 3
test_input() (in module modules.people), 2
total() (modules.studentgroup.StudentGroup property), 4

V

value_x() (modules.responselist.Response property), 6
value_y() (modules.responselist.Response property), 6