Documentation

API Documentation

April 9, 2017

Contents

Contents **1**

1 Module boy_geek **2**
1.1 Variables . . . 2
1.2 Class GeekBoy . . . 2
1.2.1 Methods . . . 2

2 Module boy_generous **3**
2.1 Variables . . . 3
2.2 Class GenerousBoy . . . 3
2.2.1 Methods . . . 3

3 Module boy_miser **4**
3.1 Variables . . . 4
3.2 Class MiserBoy . . . 4
3.2.1 Methods . . . 4

4 Module boys **5**
4.1 Variables . . . 5
4.2 Class Boy . . . 5
4.2.1 Methods . . . 5

5 Module couple **6**
5.1 Variables . . . 6
5.2 Class Couple . . . 6
5.2.1 Methods . . . 6

6 Module gift_essential **7**
6.1 Variables . . . 7
6.2 Class EssentialGift . . . 7
6.2.1 Methods . . . 7

7 Module gift_luxury **8**
7.1 Variables . . . 8
7.2 Class LuxuryGift . . . 8
7.2.1 Methods . . . 8

8 Module gift_utility **9**

8.1 Variables . . . 9
8.2 Class UtilityGift . . . 9
8.2.1 Methods . . . 9

9 Module gifts **10**
9.1 Variables . . . 10
9.2 Class Gift . . . 10
9.2.1 Methods . . . 10

10 Module girl_choosy **11**
10.1 Variables . . . 11
10.2 Class ChoosyGirl . . . 11
10.2.1 Methods . . . 11

11 Module girl_desperate **12**
11.1 Variables . . . 12
11.2 Class DesperateGirl . . . 12
11.2.1 Methods . . . 12

12 Module girl_normal **13**
12.1 Variables . . . 13
12.2 Class NormalGirl . . . 13
12.2.1 Methods . . . 13

13 Module girls **14**
13.1 Variables . . . 14
13.2 Class Girl . . . 14
13.2.1 Methods . . . 14

14 Module q4_driver **15**
14.1 Functions . . . 15
14.2 Variables . . . 15

15 Module utility **16**
15.1 Functions . . . 16
15.2 Variables . . . 16

1 Module boy_geek

1.1 Variables

Name	Description
___package___	**Value:** `None`

1.2 Class GeekBoy

boys.Boy
└
boy_geek.GeekBoy

boy class for geek boys

1.2.1 Methods

___init___(*self*, *name*, *atr*, *gfbudget*, *intelli*, *min_atr_req*, *type*)

constructor

Overrides: boys.Boy.___init___

Inherited from boys.Boy(Section 4.2)

is_elligible()

2 Module boy_generous

2.1 Variables

Name	Description
___package___	**Value:** `None`

2.2 Class GenerousBoy

boys.Boy
└
boy_generous.GenerousBoy

boy class for generous boys

2.2.1 Methods

___init___(*self*, *name*, *atr*, *gfbudget*, *intelli*, *min_atr_req*, *type*)

constructor

Overrides: boys.Boy.___init___

Inherited from boys.Boy(Section 4.2)

is_elligible()

3 Module boy_miser

3.1 Variables

Name	Description
___package___	**Value:** `None`

3.2 Class MiserBoy

boys.Boy
└
boy_miser.MiserBoy

boy class for miser boys

3.2.1 Methods

___init___(*self*, *name*, *atr*, *gfbudget*, *intelli*, *min_atr_req*, *type*)
constructor
Overrides: boys.Boy.___init___

Inherited from boys.Boy(Section 4.2)

is_elligible()

4 Module boys

4.1 Variables

Name	Description
___package___	**Value:** `None`

4.2 Class Boy

Known Subclasses: boy_geek.GeekBoy, boy_generous.GenerousBoy, boy_miser.MiserBoy

boy class for all boys

4.2.1 Methods

___init___(*self*, *name*, *atr*, *gfbudget*, *intelli*, *min_atr_req*, *type*)

constructor

is_elligible(*self*, *mbudget*, *atr*)

checks the elligibility of a given Girl, for the current instance of Boy class

5 Module couple

5.1 Variables

Name	Description
___package___	**Value:** `None`

5.2 Class Couple

couple class for all couples

5.2.1 Methods

___init___(*self*, *boy*, *girl*)

constructor

set_happiness(*self*)

set the happiness of a couple

set_compatibility(*self*)

set the compatibility of a couple

6 Module gift_essential

6.1 Variables

Name	Description
___package___	**Value:** `None`

6.2 Class EssentialGift

gifts.Gift
└
gift_essential.EssentialGift

gift class for essential gifts

6.2.1 Methods

___init___(*self*, *name*, *price*, *value*, *type*)

constructor

Overrides: gifts.Gift.___init___

7 Module gift_luxury

7.1 Variables

Name	Description
___package___	**Value:** `None`

7.2 Class LuxuryGift

gifts.Gift
└
gift_luxury.LuxuryGift

gift class for luxury gifts

7.2.1 Methods

___init___(*self*, *name*, *price*, *value*, *type*, *lxry_rtng*, *difficulty*)

constructor

Overrides: gifts.Gift.___init___

8 Module gift_utility

8.1 Variables

Name	Description
___package___	**Value:** `None`

8.2 Class UtilityGift

gifts.Gift
└
gift_utility.UtilityGift

gift class for utility gifts

8.2.1 Methods

___init___(*self*, *name*, *price*, *value*, *type*, *utlty_value*, *utlty_class*)

constructor

Overrides: gifts.Gift.___init___

9 Module gifts

9.1 Variables

Name	Description
___package___	**Value:** `None`

9.2 Class Gift

Known Subclasses: gift_essential.EssentialGift, gift_luxury.LuxuryGift, gift_utility.UtilityGift

gift class for all gifts

9.2.1 Methods

___init___(*self*, *name*, *price*, *value*, *type*)

constructor

10 Module girl_choosy

10.1 Variables

Name	Description
___package___	**Value:** `None`

10.2 Class ChoosyGirl

girls.Girl
└
girl_choosy.ChoosyGirl

girl class for choosy girls

10.2.1 Methods

___init___(*self*, *name*, *atr*, *mbudget*, *intelli*, *type*)
constructor
Overrides: girls.Girl.___init___

Inherited from girls.Girl(Section 13.2)

is_elligible()

11 Module girl_desperate

11.1 Variables

Name	Description
___package___	**Value:** `None`

11.2 Class DesperateGirl

girls.Girl
└
girl_desperate.DesperateGirl

girl class for desperate girls

11.2.1 Methods

___init___(*self*, *name*, *atr*, *mbudget*, *intelli*, *type*)
constructor
Overrides: girls.Girl.___init___

Inherited from girls.Girl(Section 13.2)

is_elligible()

12 Module girl_normal

12.1 Variables

Name	Description
___package___	**Value:** `None`

12.2 Class NormalGirl

girls.Girl
└
girl_normal.NormalGirl

girl class for normal girls

12.2.1 Methods

___init___(*self*, *name*, *atr*, *mbudget*, *intelli*, *type*)

constructor

Overrides: girls.Girl.___init___

Inherited from girls.Girl(Section 13.2)

is_elligible()

13 Module girls

13.1 Variables

Name	Description
___package___	**Value:** `None`

13.2 Class Girl

Known Subclasses: girl_choosy.ChoosyGirl, girl_desperate.DesperateGirl, girl_normal.NormalGirl

girl class for all girls

13.2.1 Methods

___init___(*self*, *name*, *atr*, *mbudget*, *intelli*, *type*)

constructor

is_elligible(*self*, *gfbudget*)

checks the elligibility of a given Boy, for the current instance of Girl class

14 Module q4_driver

14.1 Functions

allocate()

reads and stores the input from the boys.csv and girls.csv files and then makes the valid couples

calculate_happiness(*B*, *G*, *C*)

reads and stores the inputs from the gifts.csv file and provide gift exchanges between the couples

set_girl_happiness(*c*, *v1*, *v2*)

sets the happiness of a girl according to her type

hp_miser(*GFT*, *c*)

provides gifting logic for Miser type Boys and sets the Happiness of the commited Boy and the whole couple, also sets the Compatibility of the couple

hp_generous(*GFT*, *c*)

provides gifting logic for Generous type Boys and sets the Happiness of the commited Boy and the whole couple, also sets the Compatibility of the couple

hp_geek(*GFT*, *c*)

provides gifting logic for Geek type Boys and sets the Happiness of the commited Boy and the whole couple, also sets the Compatibility of the couple

print_sc(*C*, *k*)

prints the k least happy Couples

newallocate(*B*, *G*, *C*, *k*)

allocates new boys to the girls who broke up

14.2 Variables

Name	Description
___package___	**Value:** `None`

15 Module utility

15.1 Functions

utility()

creates the input csv files

create(*file*, *list*)

writes to csv files

15.2 Variables

Name	Description
___package___	**Value:** `None`

Index

boy_geek *(module)*, 2
    boy_geek.GeekBoy *(class)*, 2
boy_generous *(module)*, 3
    boy_generous.GenerousBoy *(class)*, 3
boy_miser *(module)*, 4
    boy_miser.MiserBoy *(class)*, 4
boys *(module)*, 5
    boys.Boy *(class)*, 5
        boys.Boy.__init__ *(method)*, 5
        boys.Boy.is_elligible *(method)*, 5

couple *(module)*, 6
    couple.Couple *(class)*, 6
        couple.Couple.__init__ *(method)*, 6
        couple.Couple.set_compatibility *(method)*, 6
        couple.Couple.set_happiness *(method)*, 6

gift_essential *(module)*, 7
    gift_essential.EssentialGift *(class)*, 7
gift_luxury *(module)*, 8
    gift_luxury.LuxuryGift *(class)*, 8
gift_utility *(module)*, 9
    gift_utility.UtilityGift *(class)*, 9
gifts *(module)*, 10
    gifts.Gift *(class)*, 10
        gifts.Gift.__init__ *(method)*, 10
girl_choosy *(module)*, 11
    girl_choosy.ChoosyGirl *(class)*, 11
girl_desperate *(module)*, 12
    girl_desperate.DesperateGirl *(class)*, 12
girl_normal *(module)*, 13
    girl_normal.NormalGirl *(class)*, 13
girls *(module)*, 14
    girls.Girl *(class)*, 14
        girls.Girl.__init__ *(method)*, 14
        girls.Girl.is_elligible *(method)*, 14

q4_driver *(module)*, 15
    q4_driver.allocate *(function)*, 15
    q4_driver.calculate_happiness *(function)*, 15
    q4_driver.hp_geek *(function)*, 15
    q4_driver.hp_generous *(function)*, 15
    q4_driver.hp_miser *(function)*, 15
    q4_driver.newallocate *(function)*, 15
    q4_driver.print_sc *(function)*, 15
    q4_driver.set_girl_happiness *(function)*, 15

utility *(module)*, 16
    utility.create *(function)*, 16
    utility.utility *(function)*, 16