

Documentation

API Documentation

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1 Module boy_geek

1.1 Variables

Name	Description
<code>__package__</code>	Value: None

1.2 Class GeekBoy

```

boys.Boy └─
           boy_geek.GeekBoy

```

boy class for geek boys

1.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor
Overrides: boys.Boy.__init__

Inherited from boys.Boy(Section 4.2)

`is_elligible()`

2 Module *boy_generous*

2.1 Variables

Name	Description
<code>__package__</code>	Value: None

2.2 Class *GenerousBoy*

```

boys.Boy └─
           boy_generous.GenerousBoy

```

boy class for generous boys

2.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor
Overrides: <code>boys.Boy.__init__</code>

Inherited from `boys.Boy`(Section 4.2)

`is_elligible()`

3 Module boy_miser

3.1 Variables

Name	Description
<code>__package__</code>	Value: None

3.2 Class MiserBoy

```

boys.Boy └─
           boy_miser.MiserBoy

```

boy class for miser boys

3.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor
Overrides: boys.Boy.__init__

Inherited from boys.Boy(Section 4.2)

`is_elligible()`

4 Module boys

4.1 Variables

Name	Description
<code>__package__</code>	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

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor

<code>is_elligible(self, mbudget)</code>
checks the elligibility of a given Girl, for the current instance of Boy class

5 Module couple

5.1 Variables

Name	Description
<code>__package__</code>	Value: None

5.2 Class Couple

couple class for all couples

5.2.1 Methods

<code>__init__(self, boy, girl)</code>
constructor

<code>set_happiness(self)</code>
set the happiness of a couple

<code>set_compatibility(self)</code>
set the compatibility of a couple

6 Module `gift_essential`

6.1 Variables

Name	Description
<code>__package__</code>	Value: None

6.2 Class `EssentialGift`

`gifts.Gift` └─
 `gift_essential.EssentialGift`

gift class for essential gifts

6.2.1 Methods

<code>__init__</code> (<i>self, name, price, value, type</i>)
constructor
Overrides: <code>gifts.Gift.__init__</code>

7 Module `gift_luxury`

7.1 Variables

Name	Description
<code>__package__</code>	Value: <code>None</code>

7.2 Class `LuxuryGift`

`gifts.Gift` —
`gift_luxury.LuxuryGift`

gift class for luxury gifts

7.2.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>type</i> , <i>lxry_rtnng</i> , <i>difficulty</i>)
constructor
Overrides: <code>gifts.Gift.__init__</code>

8 Module `gift_utility`

8.1 Variables

Name	Description
<code>__package__</code>	Value: None

8.2 Class `UtilityGift`

`gifts.Gift` —
`gift_utility.UtilityGift`

gift class for utility gifts

8.2.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>type</i> , <i>utlty_value</i> , <i>utlty_class</i>)
constructor
Overrides: <code>gifts.Gift.__init__</code>

9 Module gifts

9.1 Variables

Name	Description
<code>__package__</code>	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

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>type</i>)
constructor

10 Module girl_choosy

10.1 Variables

Name	Description
<code>__package__</code>	Value: None

10.2 Class ChoosyGirl

girls.Girl —
 girl_choosy.ChoosyGirl

girl class for choosy girls

10.2.1 Methods

<code>__init__(self, name, atr, mbudget, intelli, type)</code>
constructor
Overrides: girls.Girl.__init__

Inherited from girls.Girl(Section 13.2)

`is_elligible()`

11 Module `girl_desperate`

11.1 Variables

Name	Description
<code>__package__</code>	Value: None

11.2 Class `DesperateGirl`

girls.Girl —
 girl_desperate.DesperateGirl

girl class for desperate girls

11.2.1 Methods

<code>__init__(self, name, atr, mbudget, intelli, type)</code>
constructor
Overrides: girls.Girl.__init__

Inherited from girls.Girl(Section 13.2)

`is_elligible()`

12 Module girl_normal

12.1 Variables

Name	Description
<code>__package__</code>	Value: None

12.2 Class NormalGirl

girls.Girl —
 girl_normal.NormalGirl

girl class for normal girls

12.2.1 Methods

<code>__init__</code> (<i>self, name, atr, mbudget, intelli, type</i>)
constructor
Overrides: girls.Girl. <code>__init__</code>

Inherited from girls.Girl(Section 13.2)

`is_elligible()`

13 Module girls

13.1 Variables

Name	Description
<code>__package__</code>	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

<code>__init__(self, name, atr, mbudget, intelli, type)</code>
constructor

<code>is_elligible(self, gfbudget)</code>
checks the elligibility of a given Boy, for the current instance of Girl class

14 Module q9_driver

14.1 Functions

best_k(*alist*, *k*, *criterion*)

returns the best k valued items from a given list of items according to given criterion

allocate()

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

calculate_happiness(*C*, *k*)

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 committed 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 committed 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 committed Boy and the whole couple, also sets the Compatibility of the couple

print_gifts(*C*)

prints all the Gifts gifted by Boyfriend to his Girlfriend for all the Couples

print_hc(*C*, *k*)

prints the k most Happy Couples and k most Compatible Couples

14.2 Variables

Name	Description
__package__	Value: None

15 Module utility

15.1 Functions

utility()
creates the input csv files

create (<i>file</i> , <i>list</i>)
writes to csv files

15.2 Variables

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__package__	Value: None

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