

Question10

API Documentation

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1 Package q10

1.1 Modules

- **Couple** (*Section 2, p. 3*)
- **app** (*Section 3, p. 4*)
- **boy** (*Section 4, p. 5*)
- **gift** (*Section 5, p. 7*)
- **girl** (*Section 6, p. 8*)
- **helper** (*Section 7, p. 11*)

1.2 Variables

Name	Description
<code>--package--</code>	Value: None

2 Module q10.Couple

2.1 Variables

Name	Description
<code>--package--</code>	Value: 'q10'

2.2 Class Couple

2.2.1 Methods

<code>--init--(self, boy, girl, gift_list, happiness=0)</code>
--

:param boy: boy object :param girl: girl object :param gift_list: list of gift object :param happiness: happiness of couple

<code>--str--(self)</code>

<code>allocate_gifts(self, gift_list)</code>
--

Allocates gift from given gift list :param gift_list: list of gift objects :return:

<code>set_happiness(self)</code>

Calculates boy's and girl's happiness individually and adds it. :return:
--

<code>get_compatibility(self)</code>

Calculates compatibility of the couple :return:

3 Module q10.app

3.1 Functions

<code>main()</code>

3.2 Variables

Name	Description
<code>--package--</code>	Value: 'q10'

4 Module q10.boy

4.1 Variables

Name	Description
<code>--package--</code>	Value: None

4.2 Class Boy

Known Subclasses: q10.boy.GeekBoy, q10.boy.GenerousBoy, q10.boy.MiserBoy

Class for boy

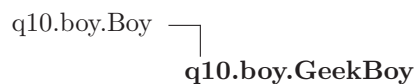
4.2.1 Methods

```
--init__(self, name, attractiveness, min_attraction, intelligence, budget, single=1,
happiness=0)
```

```
--str__(self)
```

```
change_commitment(self)
```

4.3 Class GeekBoy



4.3.1 Methods

```
--init__(self, name, attractiveness, min_attraction, intelligence, budget, single=1,
happiness=0)
```

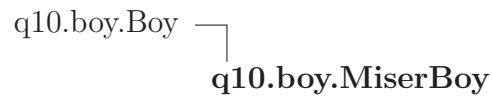
Overrides: q10.boy.Boy.--init--

```
get_happiness(self, girlfriend)
```

Inherited from q10.boy.Boy(Section 4.2)

`--str__()`, `change_commitment()`

4.4 Class MiserBoy



4.4.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>attractiveness</i> , <i>min_attraction</i> , <i>intelligence</i> , <i>budget</i> , <i>single</i> =1, <i>happiness</i> =0) Overrides: q10.boy.Boy. <code>__init__</code>
--

<code>get_happiness</code> (<i>self</i> , <i>girlfriend</i>)

Inherited from q10.boy.Boy(Section 4.2)

`__str__`(), **`change_commitment`**()

4.5 Class GenerousBoy



4.5.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>attractiveness</i> , <i>min_attraction</i> , <i>intelligence</i> , <i>budget</i> , <i>single</i> =1, <i>happiness</i> =0) Overrides: q10.boy.Boy. <code>__init__</code>
--

<code>get_happiness</code> (<i>self</i> , <i>girlfriend</i>)

Inherited from q10.boy.Boy(Section 4.2)

`__str__`(), **`change_commitment`**()

5 Module *q10.gift*

5.1 Variables

Name	Description
<code>--package--</code>	Value: None

5.2 Class *EssentialGift*

5.2.1 Methods

<code>--init--</code> (<i>self</i> , <i>name</i> , <i>price</i> , <i>value</i>) <hr/> :param name: name of gift :param price: price of gift :param value: value of the gift

5.3 Class *LuxuryGift*

5.3.1 Methods

<code>--init--</code> (<i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>difficulty</i> , <i>rating</i>) <hr/> :param name: name of gift :param price: price of gift :param value: value of gift :param difficulty: difficulty in obtaining the gift :param rating: rating of the gift

5.4 Class *UtilityGift*

5.4.1 Methods

<code>--init--</code> (<i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>utility_value</i> , <i>utility_class</i>) <hr/> :param name: name of gift :param price: price of gift :param value: value of gift :param utility_value: utility value of gift :param utility_class: utility class of gift

6 Module q10.girl

6.1 Variables

Name	Description
<code>--package--</code>	Value: 'q10'

6.2 Class Girl

Known Subclasses: q10.girl.ChoosyGirl, q10.girl.DesperateGirl, q10.girl.NormalGirl

Class for girl

6.2.1 Methods

```
--init--(self, name, attractiveness, intelligence, budget, single=1, happiness=0)
```

```
:param name: Name of the girl :param attractiveness: attractiveness of the
girl :param intelligence: intelligence of the girl :param budget: maintenance
budget if the girl :param category: Category of the girl, wither choosy, normal
or desperate :param single: single status, either 0 or 1 :param happiness:
happiness of girl
```

```
--str--(self)
```

```
change_commitment(self, val=0)
```

```
change commitment status to given value :param val: :return:
```

6.3 Class ChoosyGirl

```

q10.girl.Girl └─
                  q10.girl.ChoosyGirl

```

6.3.1 Methods

```
__init__(self, name, attractiveness, intelligence, budget, single=1, happiness=0)

:param name: Name of the girl :param attractiveness: attractiveness of the
girl :param intelligence: intelligence of the girl :param budget: maintenance
budget if the girl :param category: Category of the girl, wither choosy, normal
or desperate :param single: single status, either 0 or 1 :param happiness:
happiness of girl
Overrides: q10.girl.Girl.__init__ extit(inherited documentation)
```

```
get_happiness(self)
```

Inherited from q10.girl.Girl(Section 6.2)

```
__str__(), change_commitment()
```

6.4 Class NormalGirl

```
q10.girl.Girl └─
                q10.girl.NormalGirl
```

6.4.1 Methods

```
__init__(self, name, attractiveness, intelligence, budget, single=1, happiness=0)

:param name: Name of the girl :param attractiveness: attractiveness of the
girl :param intelligence: intelligence of the girl :param budget: maintenance
budget if the girl :param category: Category of the girl, wither choosy, normal
or desperate :param single: single status, either 0 or 1 :param happiness:
happiness of girl
Overrides: q10.girl.Girl.__init__ extit(inherited documentation)
```

```
get_happiness(self)
```

Inherited from q10.girl.Girl(Section 6.2)

```
__str__(), change_commitment()
```

6.5 Class *DesperateGirl*



6.5.1 Methods

```
__init__(self, name, attractiveness, intelligence, budget, single=1, happiness=0)
```

:param *name*: Name of the girl :param *attractiveness*: attractiveness of the girl :param *intelligence*: intelligence of the girl :param *budget*: maintenance budget if the girl :param *category*: Category of the girl, wither choosy, normal or desperate :param *single*: single status, either 0 or 1 :param *happiness*: happiness of girl

Overrides: *q10.girl.Girl.__init__* extit(inherited documentation)

```
get_happiness(self)
```

Inherited from q10.girl.Girl(Section 6.2)

```
__str__()
```

, *change_commitment*()

7 Module q10.helper

7.1 Functions

form_couple(*boy, girl*)

Takes a boy and girl and forms it couple :param boy: boy object :param girl: girl object :return:

get_boy_list()

Autogenerates a random boy list :return:

get_girl_list()

autogenerates a random girl list :return:

get_gift_list(*filename*)

Extracts gift data from csv file :param filename: filename of the csv file :return: list of gift objects

7.2 Variables

Name	Description
__package__	Value: 'q10'

8 Script script-log.txt

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