

Assignment PPL Question-6

API Documentation

April 10, 2017

Contents

Contents	1
1 Module Choosy	2
1.1 Variables	2
1.2 Class Choosy	2
1.2.1 Methods	2
1.2.2 Class Variables	2
2 Module Desperate	3
2.1 Variables	3
2.2 Class Desperate	3
2.2.1 Methods	3
2.2.2 Class Variables	3
3 Module Essential	4
3.1 Variables	4
3.2 Class Essential	4
3.2.1 Methods	4
3.2.2 Class Variables	4
4 Module Geek	5
4.1 Variables	5
4.2 Class Geek	5
4.2.1 Methods	5
4.2.2 Class Variables	5
5 Module Generous	6
5.1 Variables	6
5.2 Class Generous	6
5.2.1 Methods	6
5.2.2 Class Variables	6
6 Module Luxury	7
6.1 Variables	7
6.2 Class Luxury	7
6.2.1 Methods	7
6.2.2 Class Variables	7

7	Module Miser	8
7.1	Variables	8
7.2	Class Miser	8
7.2.1	Methods	8
7.2.2	Class Variables	8
8	Module Normal	9
8.1	Variables	9
8.2	Class Normal	9
8.2.1	Methods	9
8.2.2	Class Variables	9
9	Module Utility	10
9.1	Variables	10
9.2	Class Utility	10
9.2.1	Methods	10
9.2.2	Class Variables	10
10	Module boy	11
10.1	Variables	11
10.2	Class Boy	11
10.2.1	Methods	11
10.2.2	Class Variables	11
11	Module couples	13
11.1	Variables	13
11.2	Class Couple	13
11.2.1	Methods	13
12	Module gift_item	14
12.1	Variables	14
12.2	Class Gift	14
12.2.1	Methods	14
12.2.2	Class Variables	14
13	Module girl	15
13.1	Variables	15
13.2	Class girl	15
13.2.1	Methods	15
13.2.2	Class Variables	15
14	Module logs	17
14.1	Functions	17
14.2	Variables	17
15	Module main	18
15.1	Functions	18
15.2	Variables	18
16	Module util	19
16.1	Functions	19
16.2	Variables	19

1 Module Choosy

1.1 Variables

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

1.2 Class Choosy

girl.girl —
Choosy.Choosy

Class for choosy girl

1.2.1 Methods

<code>__init__</code> (<i>self, name, attractiveness, maintenance_budget, intelligence, type_</i>)
Constructor for initialising choosy girl
Overrides: girl.girl. <code>__init__</code>

Inherited from girl.girl (Section 13.2)

`is_eligible()`, `modify_maintenance_budget()`, `set_boyfriend()`, `set_happiness()`

1.2.2 Class Variables

Name	Description
<i>Inherited from girl.girl (Section 13.2)</i>	
attractiveness, boyfriend, happiness, intelligence, maintenance_budget, name, relationship_status, type_	

2 Module Desperate

2.1 Variables

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

2.2 Class Desperate

girl.girl —
Desperate.Desperate

Class for desperate girls

2.2.1 Methods

<code>__init__(self, name, attractiveness, maintenance_budget, intelligence, type_)</code>
Constructor for initialising Desperate girl
Overrides: girl.girl.__init__

Inherited from girl.girl (Section 13.2)

`is_eligible()`, `modify_maintenance_budget()`, `set_boyfriend()`, `set_happiness()`

2.2.2 Class Variables

Name	Description
<i>Inherited from girl.girl (Section 13.2)</i>	
<code>attractiveness</code> , <code>boyfriend</code> , <code>happiness</code> , <code>intelligence</code> , <code>maintenance_budget</code> , <code>name</code> , <code>relationship_status</code> , <code>type_</code>	

3 Module Essential

3.1 Variables

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

3.2 Class Essential

gift_item.Gift —
Essential.Essential

Class for Essential gift

3.2.1 Methods

<code>__init__</code> (<i>self, name, cost, value, type__</i>)
Constructor for initialising essential gifts.
Overrides: gift_item.Gift. <code>__init__</code>

3.2.2 Class Variables

Name	Description
<i>Inherited from gift_item.Gift (Section 12.2)</i>	
cost, name, type__, value	

4 Module Geek

4.1 Variables

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

4.2 Class Geek

boy.Boy —
Geek.Geek

Class for geek boy

4.2.1 Methods

<code>__init__</code> (<i>self, name, attractiveness, girlfriend_budget, intelligence, minimum_attraction_requirement, type_</i>)
Constructor for initialising geek boy
Overrides: boy.Boy. <code>__init__</code>

Inherited from boy.Boy (Section 10.2)

`is_eligible()`, `modify_boys_girlfriend_budget()`, `set_girlfriend()`, `set_happiness()`

4.2.2 Class Variables

Name	Description
<i>Inherited from boy.Boy (Section 10.2)</i>	
<code>attractiveness</code> , <code>boys_girlfriend_budget</code> , <code>girlfriend</code> , <code>happiness</code> , <code>intelligence</code> , <code>minimum_attraction_requirement</code> , <code>name</code> , <code>relationship_status</code> , <code>type_</code>	

5 Module Generous

5.1 Variables

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

5.2 Class Generous

boy.Boy —
Generous.Generous

Class for generous boy

5.2.1 Methods

<code>__init__</code> (<i>self, name, attractiveness, girlfriend_budget, intelligence, minimum_attraction_requirement, type_</i>)
Constructor for initialising generous boy
Overrides: boy.Boy. <code>__init__</code>

Inherited from boy.Boy (Section 10.2)

`is_eligible()`, `modify_boys_girlfriend_budget()`, `set_girlfriend()`, `set_happiness()`

5.2.2 Class Variables

Name	Description
<i>Inherited from boy.Boy (Section 10.2)</i>	
<code>attractiveness</code> , <code>boys_girlfriend_budget</code> , <code>girlfriend</code> , <code>happiness</code> , <code>intelligence</code> , <code>minimum_attraction_requirement</code> , <code>name</code> , <code>relationship_status</code> , <code>type_</code>	

6 Module *Luxury*

6.1 Variables

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

6.2 Class *Luxury*

`gift_item.Gift` —
 Luxury.Luxury

Class for *Luxury* gift

6.2.1 Methods

<code>__init__(self, name, cost, value, type__)</code>
Constructor for initialising the <i>Luxury</i> gift
Overrides: <code>gift_item.Gift.__init__</code>

6.2.2 Class Variables

Name	Description
<i>Inherited from <code>gift_item.Gift</code> (Section 12.2)</i>	
<code>cost</code> , <code>name</code> , <code>type__</code> , <code>value</code>	

7 Module Miser

7.1 Variables

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

7.2 Class Miser

```
boy.Boy └─ Miser.Miser
```

Class for miser boy

7.2.1 Methods

<code>__init__</code> (<i>self, name, attractiveness, girlfriend_budget, intelligence, minimum_attraction_requirement, type_</i>)
Constructor for initialising Miser boy
Overrides: boy.Boy. <code>__init__</code>

Inherited from boy.Boy (Section 10.2)

`is_eligible()`, `modify_boys_girlfriend_budget()`, `set_girlfriend()`, `set_happiness()`

7.2.2 Class Variables

Name	Description
<i>Inherited from boy.Boy (Section 10.2)</i>	
<code>attractiveness</code> , <code>boys_girlfriend_budget</code> , <code>girlfriend</code> , <code>happiness</code> , <code>intelligence</code> , <code>minimum_attraction_requirement</code> , <code>name</code> , <code>relationship_status</code> , <code>type_</code>	

8 Module Normal

8.1 Variables

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

8.2 Class Normal

girl.girl —
Normal.Normal

Class for normal girl

8.2.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>attractiveness</i> , <i>maintenance_budget</i> , <i>intelligence</i> , <i>type_</i>)
Constructor for initialising Normal girl.
Overrides: girl.girl. <code>__init__</code>

Inherited from girl.girl (Section 13.2)

`is_eligible()`, `modify_maintenance_budget()`, `set_boyfriend()`, `set_happiness()`

8.2.2 Class Variables

Name	Description
<i>Inherited from girl.girl (Section 13.2)</i>	
attractiveness, boyfriend, happiness, intelligence, maintenance_budget, name, relationship_status, type_	

9 Module Utility

9.1 Variables

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

9.2 Class Utility

`gift_item.Gift` —
 Utility.Utility

Class for utility gift

9.2.1 Methods

<code>__init__(self, name, cost, value, type_)</code>
Constructor for initialising Utility gift.
Overrides: <code>gift_item.Gift.__init__</code>

9.2.2 Class Variables

Name	Description
<i>Inherited from <code>gift_item.Gift</code> (Section 12.2)</i>	
<code>cost</code> , <code>name</code> , <code>type_</code> , <code>value</code>	

10 Module boy

10.1 Variables

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

10.2 Class Boy

Known Subclasses: Geek.Geek, Generous.Generous, Miser.Miser

Class for BOY

10.2.1 Methods

<code>__init__(self, name, attractiveness, girlfriend_budget, intelligence, minimum_attraction_requirement, type_)</code>
Constructor for initialising boy class
<code>set_happiness(self, happiness)</code>
Method for setting happiness
<code>set_girlfriend(self, girlfriend)</code>
Method for setting girlfriend
<code>modify_boys_girlfriend_budget(self, budget)</code>
Method for modifying the girlfriend budget
<code>is_eligible(self, maintenance_budget, attractiveness)</code>
Method for checking the eligibility

10.2.2 Class Variables

Name	Description
name	Value: ''
attractiveness	Value: 0
boys_girlfriend_budget	Value: 0

continued on next page

Name	Description
intelligence	Value: 0
minimum_attraction_requirement	Value: 0
type__	Value: ''
relationship_status	Value: 'single'
happiness	Value: 0
girlfriend	Value: ''

11 Module couples

11.1 Variables

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

11.2 Class Couple

Class for couples

11.2.1 Methods

<code>__init__(self, boy, girl)</code>
Constructor for intialising couple

<code>set_compatibility(self)</code>
Method for setting compatibility

<code>set_happiness(self)</code>
Method for setting Happiness

12 Module gift_item

12.1 Variables

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

12.2 Class Gift

Known Subclasses: Essential.Essential, Luxury.Luxury, Utility.Utility

12.2.1 Methods

<code>__init__(self, name, cost, value, type_)</code>
Constructor for initialising gift

12.2.2 Class Variables

Name	Description
name	Value: ''
cost	Value: 0
value	Value: 0
type_	Class for gift Value: ''

13 Module girl

13.1 Variables

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

13.2 Class girl

Known Subclasses: Choosy.Choosy, Desperate.Desperate, Normal.Normal

Class for girl

13.2.1 Methods

<code>__init__(self, name, attractiveness, maintenance_budget, intelligence, type_)</code>
Constructor fot initialising girl
<code>set_happiness(self, happiness)</code>
Method for setting happiness
<code>set_boyfriend(self, boyfriend)</code>
Fuction for setting boyfriend
<code>modify_maintenance_budget(self, budget)</code>
Function for modifying maintainence budget
<code>is_eligible(self, boys_girlfriend_budget)</code>
Method for checking the eligibility

13.2.2 Class Variables

Name	Description
name	Value: ''
attractiveness	Value: 0
maintenance_budget	Value: 0

continued on next page

Name	Description
intelligence	Value: 0
relationship_status	Value: ''
boyfriend	Value: ''
happiness	Value: 0
type_	Value: ''

14 Module logs

14.1 Functions

<code>log_maker(<i>write</i>)</code>
Function for creating log file

14.2 Variables

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

15 Module main

15.1 Functions

calc_happiness (H)

Function to calculate happiness

happy_couple (H, k)

Function to calculate k happy couples

generous ($gifts, p$)

Function for generous boy

miser ($gifts, x$)

Function for miser boy

geek ($gifts, c$)

Function for geek boy

gifts_details (H)

Function for gift details

t_days (H)

Function for gifting in t days not limited on valentines day
--

make_couple ()

Function to make couples

test ()

Function to test all other functions

15.2 Variables

Name	Description
__package__	Value: None

16 Module util

16.1 Functions

testing_util()
Function for creating random girls, boys and gifts.

create(<i>file_name</i>, <i>list_name</i>)
Function to open a file and write content in it.

16.2 Variables

Name	Description
__package__	Value: None

Index

- boy (*module*), 11–12
 - boy.Boy (*class*), 11–12
 - boy.Boy.__init__ (*method*), 11
 - boy.Boy.is_eligible (*method*), 11
 - boy.Boy.modify_boys_girlfriend_budget (*method*), 11
 - boy.Boy.set_girlfriend (*method*), 11
 - boy.Boy.set_happiness (*method*), 11
- Choosy (*module*), 2
 - Choosy.Choosy (*class*), 2
- couples (*module*), 13
 - couples.Couple (*class*), 13
 - couples.Couple.__init__ (*method*), 13
 - couples.Couple.set_compatibility (*method*), 13
 - couples.Couple.set_happiness (*method*), 13
- Desperate (*module*), 3
 - Desperate.Desperate (*class*), 3
- Essential (*module*), 4
 - Essential.Essential (*class*), 4
- Geek (*module*), 5
 - Geek.Geek (*class*), 5
- Generous (*module*), 6
 - Generous.Generous (*class*), 6
- gift_item (*module*), 14
 - gift_item.Gift (*class*), 14
 - gift_item.Gift.__init__ (*method*), 14
- girl (*module*), 15–16
 - girl.girl (*class*), 15–16
 - girl.girl.__init__ (*method*), 15
 - girl.girl.is_eligible (*method*), 15
 - girl.girl.modify_maintenance_budget (*method*), 15
 - girl.girl.set_boyfriend (*method*), 15
 - girl.girl.set_happiness (*method*), 15
- logs (*module*), 17
 - logs.log_maker (*function*), 17
- Luxury (*module*), 7
 - Luxury.Luxury (*class*), 7
- main (*module*), 18
 - main.calc_happiness (*function*), 18
 - main.geek (*function*), 18
 - main.generous (*function*), 18
 - main.gifts_details (*function*), 18
 - main.happy_couple (*function*), 18
 - main.make_couple (*function*), 18
 - main.miser (*function*), 18
 - main.t_days (*function*), 18
 - main.test (*function*), 18
- Miser (*module*), 8
 - Miser.Miser (*class*), 8
- Normal (*module*), 9
 - Normal.Normal (*class*), 9
- util (*module*), 19
 - util.create (*function*), 19
 - util.testing_util (*function*), 19
- Utility (*module*), 10
 - Utility.Utility (*class*), 10