

Assignment PPL Question-4

API Documentation

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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
__package__	Value: None

7.2 Class Miser

```
boy.Boy └─ Miser.Miser
```

Class for miser boy

7.2.1 Methods

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

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>	
attractiveness, boys_girlfriend_budget, girlfriend, happiness, intelligence, minimum_attraction_requirement, name, relationship_status, type_	

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

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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>
Fucntion 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

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

14 Module logs

14.1 Functions

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

14.2 Variables

Name	Description
__package__	Value: None

15 Module main

15.1 Functions

calc_happiness (H)

Function to calculate happiness

happy_couple (H, k)

Method 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 the gift details.

test ()

Function to drive all the other functions

15.2 Variables

Name	Description
<code>__package__</code>	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

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__package__	Value: None

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