

# Question4

## API Documentation

April 10, 2017

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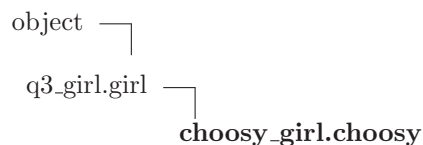
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# 1 Module choosy\_girl

## 1.1 Variables

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

## 1.2 Class choosy



### 1.2.1 Methods

```
--init__(self, name=None, attractiveness=None, intelligence=None, budget=None)
```

`x.--init__(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.--init__` `exitit`(inherited documentation)

```
cal_happiness(self, gifts_array)
```

Overrides: `q3_girl.girl.cal_happiness`

### *Inherited from object*

`--delattr__()`, `--format__()`, `--getattr__()`, `--hash__()`, `--new__()`, `--reduce__()`, `--reduce_ex__()`,  
`--repr__()`, `--setattr__()`, `--sizeof__()`, `--str__()`, `--subclasshook__()`

### 1.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class__</code>	

### 1.2.3 Instance Variables

Name	Description
<code>typee</code>	this function will calculate happppiness for choosy girl object
<i>Inherited from q3_girl.girl (Section 14.2)</i>	

*continued on next page*

Name	Description
happiness	

## 2 Module chossy\_girl

### 2.1 Variables

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

### 2.2 Class Choosy



#### 2.2.1 Methods

```
--init__(self, name=None, attractiveness=None, intelligence=None,
budget=None)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` `extit` (inherited documentation)

```
cal_happiness(self, gifts_array)
```

Overrides: `q3_girl.girl.cal_happiness`

#### *Inherited from object*

```
--delattr--(), --format--(), --getattrattribute--(), --hash--(), --new--(), --reduce--(), --reduce_ex--(),
--repr--(), --setattr--(), --sizeof--(), --str--(), --subclasshook--()
```

#### 2.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 2.2.3 Instance Variables

Name	Description
<i>Inherited from q3_girl.girl (Section 14.2)</i> happiness	

### 3 Module couple\_maker

#### 3.1 Variables

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

#### 3.2 Class couple

object └─  
couple\_maker.couple

##### 3.2.1 Methods

```
--init__(self, boy_b, girl_g)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` extit(inherited documentation)

##### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

##### 3.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	



## 4 Module *desperate\_girl*

### 4.1 Variables

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

### 4.2 Class *desperate*



#### 4.2.1 Methods

```
--init--(self, name=None, attractiveness=None, intelligence=None,
budget=None)
```

`x.__init__(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.__init__` extit(inherited documentation)

```
cal_happiness(self, gifts_array)
```

Overrides: `q3_girl.girl.cal_happiness`

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 4.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 4.2.3 Instance Variables

Name	Description
typee	this function will calculate happiness for desperate girl object
<i>Inherited from q3_girl.girl (Section 14.2)</i>	
happiness	

## 5 Module essential\_gift

### 5.1 Variables

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

### 5.2 Class essential



#### 5.2.1 Methods

`--init--(self, cost=None, value=None, gift_name=None)`  
`x.--init--(...)` initializes x; see `help(type(x))` for signature  
 Overrides: `object.--init--` extit(inherited documentation)

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 5.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 5.2.3 Class Variables

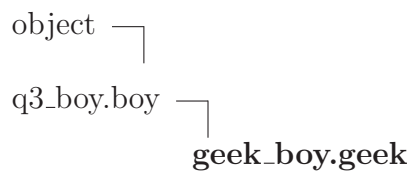
Name	Description
<i>Inherited from q3_gift.gift (Section 13.2)</i>	
<code>--abstractmethods--</code>	

## 6 Module *geek\_boy*

### 6.1 Variables

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

### 6.2 Class *geek*



#### 6.2.1 Methods

**`--init--`**(*self*, *name=None*, *attractiveness=None*, *intelligence=None*, *budget=None*)

`x.--init--(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.--init--` `exit`(inherited documentation)

**`cal_happiness`**(*self*, *gifts\_array*, *happiness\_girl*, *intelligence\_girl*)

Overrides: `q3_boy.boy.cal_happiness`

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`, `--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 6.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 6.2.3 Class Variables

Name	Description
<code>__abstractmethods__</code>	<b>Value:</b> <code>frozenset([])</code>

#### 6.2.4 Instance Variables

Name	Description
<code>typee</code>	this function is used to calculate happiness of geek boy type object
<i>Inherited from <code>q3_boy.boy</code> (Section 12.2)</i>	
<code>happiness</code>	

## 7 Module *generous\_boy*

### 7.1 Variables

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

### 7.2 Class *generous*



#### 7.2.1 Methods

**`--init--`**(*self*, *name=None*, *attractiveness=None*, *intelligence=None*, *budget=None*)

`x.--init--(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.--init--` extit(inherited documentation)

**`cal_happiness`**(*self*, *gifts\_array*, *happiness\_girl*, *intelligence\_girl*)

Overrides: `q3_boy.boy.cal_happiness`

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`, `--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 7.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 7.2.3 Class Variables

Name	Description
<code>__abstractmethods__</code>	<b>Value:</b> <code>frozenset([])</code>

#### 7.2.4 Instance Variables

Name	Description
<code>typee</code>	this function is used to calculate happiness for generous object type
<i>Inherited from <code>q3_boy.boy</code> (Section 12.2)</i>	
<code>happiness</code>	

## 8 Module *luxury\_gift*

### 8.1 Variables

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

### 8.2 Class *luxury*



#### 8.2.1 Methods

**`--init--`**(*self*, *luxury\_gift\_rating*=`None`, *cost*=`None`, *value*=`None`, *gift\_name*=`None`)

`x.--init--(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.--init--` `exitit`(inherited documentation)

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattrattribute--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`, `--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 8.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 8.2.3 Class Variables

Name	Description
<i>Inherited from <code>q3_gift.gift</code> (Section 13.2)</i>	
<code>--abstractmethods--</code>	

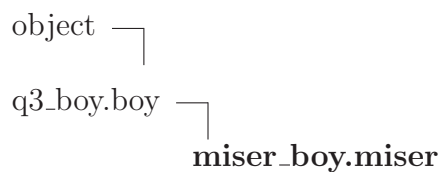


## 9 Module miser\_boy

### 9.1 Variables

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

### 9.2 Class miser



#### 9.2.1 Methods

```
--init__(self, name=None, attractiveness=None, intelligence=None,
budget=None)
```

`x.__init__(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.__init__` `extit`(inherited documentation)

```
cal_happiness(gifts_array, happiness_girl, intelligence_girl)
```

Overrides: `q3_boy.boy.cal_happiness`

#### *Inherited from object*

```
--delattr__(), --format__(), --getattr__(), --hash__(), --new__(), --reduce__(), --reduce_ex__(),
--repr__(), --setattr__(), --sizeof__(), --str__(), --subclasshook__()
```

#### 9.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 9.2.3 Class Variables

Name	Description
<code>__abstractmethods__</code>	<b>Value:</b> <code>frozenset([])</code>

#### 9.2.4 Instance Variables

Name	Description
<code>typee</code>	this function will calculate happiness for miser boy object
<i>Inherited from <code>q3_boy.boy</code> (Section 12.2)</i>	
<code>happiness</code>	

## 10 Module normal\_girl

### 10.1 Variables

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

### 10.2 Class normal



#### 10.2.1 Methods

```
--init__(self, name=None, attractiveness=None, intelligence=None,
budget=None)
```

`x.__init__(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.__init__` `extit`(inherited documentation)

```
cal_happiness(self, gifts_array)
```

Overrides: `q3_girl.girl.cal_happiness`

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 10.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 10.2.3 Instance Variables

Name	Description
<i>Inherited from q3_girl.girl (Section 14.2)</i>	happiness

## 11 Module q3

### 11.1 Functions

```
comapare_gifts(gift_object1, gift_object2)
```

```
compare_fitting(couple1, couple2)
```

```
compare_happiness(couple1, couple2)
```

### 11.2 Variables

Name	Description
girl_array	Value: []
boy_array	Value: []
couple_array	Value: []
gift_array	Value: []
row_count_boys	Value: 12
boyReader	Value: csv.reader(boysfile, delimiter=',')
boyslist	Value: [['ram ', ' 5 ', ' 9 ', ' geek ', ' 100'], ['shyam ', ' 7...
row_count_girls	Value: 6
girlReader	Value: csv.reader(girlsfile, delimiter=',')
girlslist	Value: [['radha ', ' 5 ', ' 6 ', ' choosy ', ' 80'], ['tina ', '...
row_count_gifts	Value: 20
giftReader	Value: csv.reader(giftsfile)
giftslist	Value: [['Luxury ', ' 8 ', ' 9'], ['Utility', ' 5', ' 5'], ['Essen...
k	Value: 4
file	Value: open('ans_file_Happiness.txt', 'w')
ansfilewriter	Value: csv.writer(ansfile)
__package__	Value: None
ansfile	Value: <closed file 'ans_file_Happiness.txt', mode 'a' at 0x7faf...
boysfile	Value: <closed file 'boys.csv', mode 'r' at 0x7fafd6a691e0>

*continued on next page*

Name	Description
giftsfile	<b>Value:</b> <closed file 'gifts.txt', mode 'r' at 0x7fafd6a69420>
girlsfile	<b>Value:</b> <closed file 'girls.txt', mode 'r' at 0x7fafd6a69150>
hap_boy	<b>Value:</b> 69
hap_girl	<b>Value:</b> 69
i	<b>Value:</b> 3
j	<b>Value:</b> 19
main_cost	<b>Value:</b> 178
row	<b>Value:</b> ['Luxury ', ' 6 ', ' 7']
x	<b>Value:</b> 118
y	<b>Value:</b> 129

## 12 Module q3\_boy

### 12.1 Variables

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

### 12.2 Class boy

object └─  
          q3\_boy.boy

**Known Subclasses:** `geek_boy.geek`, `generous_boy.generous`, `miser_boy.miser`

#### 12.2.1 Methods

```
--init__(self, name=None, attractiveness=None, intelligence=None,
budget=None)
```

`x.__init__(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.__init__` extit(inherited documentation)

```
cal_happiness(self, gifts_Array, happiness_of_girl, intelligence_girl)
```

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 12.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 12.2.3 Class Variables

Name	Description
<code>--abstractmethods--</code>	<b>Value:</b> <code>frozenset(['cal_happiness'])</code>

**12.2.4 Instance Variables**

Name	Description
happiness	this abstract method s used to calculate happiness , which will be made concrete in the calling class



## 13 Module q3\_gift

### 13.1 Variables

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

### 13.2 Class gift

object └─  
          **q3\_gift.gift**

**Known Subclasses:** `essential_gift.essential`, `luxury_gift.luxury`, `utility_gift.utility`

#### 13.2.1 Methods

```
--init--(self, cost=None, value=None, gift_name=None)
```

`x.__init__(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.__init__` `extit`(inherited documentation)

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattrattribute--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 13.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 13.2.3 Class Variables

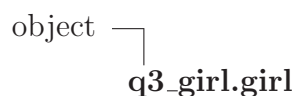
Name	Description
<code>--abstractmethods--</code>	<b>Value:</b> <code>frozenset([])</code>

## 14 Module *q3\_girl*

### 14.1 Variables

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

### 14.2 Class *girl*



**Known Subclasses:** *choosy\_girl.choosy*, *chossy\_girl.Choosy*, *desperate\_girl.desperate*, *normal\_girl.normal*

#### 14.2.1 Methods

```
--init--(self, name=None, attractiveness=None, intelligence=None,
budget=None)
```

`x.--init--(...)` initializes `x`; see `help(type(x))` for signature

Overrides: `object.--init--` extit(inherited documentation)

```
cal_happiness(self, gifts_Array)
```

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattr--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`,  
`--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 14.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 14.2.3 Instance Variables

Name	Description
happiness	this abstract function is used to calculate happiness , will be made concrete in the calling class

## 15 Module q4

### 15.1 Functions

```
comapare_gifts(gift_object1, gift_object2)
```

```
compare_fitting(couple1, couple2)
```

```
compare_happiness(couple1, couple2)
```

### 15.2 Variables

Name	Description
girl_array	Value: []
boy_array	Value: []
couple_array	Value: []
gift_array	Value: []
row_count_boys	Value: 12
boyReader	Value: csv.reader(boysfile, delimiter=',')
boyslist	Value: [['ram ', ' 5 ', ' 9 ', ' geek ', ' 100'], ['shyam ', ' 7...
row_count_girls	Value: 6
girlReader	Value: csv.reader(girlsfile, delimiter=',')
girlslist	Value: [['radha ', ' 5 ', ' 6 ', ' choosy ', ' 80'], ['tina ', '...
row_count_gifts	Value: 20
giftReader	Value: csv.reader(giftsfile)
giftslist	Value: [['Luxury ', ' 8 ', ' 9'], ['Utility', ' 5', ' 5'], ['Essen...
k	Value: 1
d	Value: {'krishna ': 'Laila '}
file	Value: open('ans_file_Happiness_after_breakup.txt', 'w')
ansfilewriter	Value: csv.writer(ansfile)
__package__	Value: None
ansfile	Value: <closed file 'ans_file_Happiness_breakup.txt', mode 'a' a...

*continued on next page*

Name	Description
boysfile	Value: <closed file 'boys.csv', mode 'r' at 0x7fafd6a69540>
giftsfile	Value: <closed file 'gifts.txt', mode 'r' at 0x7fafd6a696f0>
girlsfile	Value: <closed file 'girls.txt', mode 'r' at 0x7fafd6a695d0>
hap_boy	Value: 69
hap_girl	Value: 69
i	Value: 0
j	Value: 5
main_cost	Value: 178
row	Value: ['Luxury ', ' 6 ', ' 7']
x	Value: 118
y	Value: 129

## **16 Script script-ans\_file\_Compatibility.txt**

## **17 Script script-ans\_file\_Happiness\_after\_breakup.txt**

## 18 Script script-ans\_file\_Happiness\_breakup.txt



## **19 Script script-ans\_file\_Happiness.txt**

## 20 Script script-ans\_file\_couples\_q7.txt

## **21   Script script-ans\_file\_couples.txt**

## **22**   **Script script-boys\_csv**

## **23   Script script-gifting\_log\_q9.txt**

## 24 Script script-gifts.txt

## 25 Script script-girls.txt

## 26 Script script-log.txt

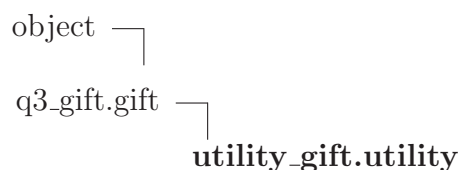


## 27 Module utility\_gift

### 27.1 Variables

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

### 27.2 Class utility



#### 27.2.1 Methods

**`--init--`**(*self*, *utility\_value*=None, *utility\_class*=None, *cost*=None, *value*=None, *gift\_name*=None)

`x.--init--(...)` initializes x; see `help(type(x))` for signature

Overrides: `object.--init--` `exitit`(inherited documentation)

#### *Inherited from object*

`--delattr--()`, `--format--()`, `--getattribute--()`, `--hash--()`, `--new--()`, `--reduce--()`, `--reduce_ex--()`, `--repr--()`, `--setattr--()`, `--sizeof--()`, `--str--()`, `--subclasshook--()`

#### 27.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>--class--</code>	

#### 27.2.3 Class Variables

Name	Description
<i>Inherited from q3_gift.gift (Section 13.2)</i>	
<code>--abstractmethods--</code>	

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