# Question3

# API Documentation

# April 10, 2017

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Class choosy Module choosy\_girl

## 1 Module choosy\_girl

### 1.1 Variables

Name	Description
package	Value: None

### 1.2 Class choosy

```
object — q3_girl.girl — choosy_girl.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__ extit(inherited documentation)
```

```
cal_happiness(self, gifts_array)
Overrides: q3_girl.girl.cal_happiness
```

### Inherited from object

```
__delattr__(), __format__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 1.2.2 Properties

Name	Description
Inherited from object	
class	

#### 1.2.3 Instance Variables

Name	Description								
typee	this	fucnction	will	calculate	happpiness	for			
	choosy girl object								
Inherited from q3_girl.girl (S	Inherited from q3_girl.girl (Section 14.2)								

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Class choosy Module choosy\_girl

Name	Description
happiness	

Class Choosy Module chossy\_girl

## 2 Module chossy\_girl

#### 2.1 Variables

Name	Description
_package_	Value: None

## 2.2 Class Choosy

```
object —
q3_girl.girl —
chossy_girl.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__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 2.2.2 Properties

Name	Description
Inherited from object	
_class	

#### 2.2.3 Instance Variables

Class Choosy Module chossy\_girl

Name	Description	
Inherited from q3_girl.girl (Section 14.2)		
happiness		

# 3 Module couple\_maker

## 3.1 Variables

Name	Description
_package_	Value: 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__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

### 3.2.2 Properties

Name	Description
Inherited from object	
class	

# 4 Module desperate\_girl

#### 4.1 Variables

Name	Description
_package_	Value: None

## 4.2 Class desperate

```
object — q3_girl.girl — desperate_girl.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__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 4.2.2 Properties

Name	Description
Inherited from object	
_class	

#### 4.2.3 Instance Variables

Name	Description
typee	this function will calculate happiness for desper-
	ate girl object
Inherited from q3_girl.girl (Section 14.2)	
happiness	

# 5 Module essential\_gift

#### 5.1 Variables

Name	Description
package	Value: None

## 5.2 Class essential

```
object —
q3_gift.gift —
essential_gift.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

#### 5.2.2 Properties

Name	Description
Inherited from object	
class	

Name	Description
Inherited from q3_gift.gift (Section 13.2)	
$\_$ abstractmethods $\_$	

Class geek Module geek\_boy

# 6 Module geek\_boy

#### 6.1 Variables

Name	Description
package	Value: None

## 6.2 Class geek

```
object — q3_boy.boy — geek_boy.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__ extit(inherited documentation)
```

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

Overrides: q3_boy.boy.cal_happiness
```

# Inherited from object

```
__delattr__(), __format__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 6.2.2 Properties

Name	Description
Inherited from object	
_class	

Class geek\_boy

Name	Description
_abstractmethods_	Value: frozenset([])

## 6.2.4 Instance Variables

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

# 7 Module generous\_boy

#### 7.1 Variables

Name	Description
_package_	Value: None

## 7.2 Class generous

```
object —
q3_boy.boy —
generous_boy.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, intellligence_girl)
Overrides: q3_boy.boy.cal_happiness
```

## Inherited from object

```
__delattr__(), __format__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 7.2.2 Properties

Name	Description
Inherited from object	
_class	

Name	Description
_abstractmethods_	Value: frozenset([])

## 7.2.4 Instance Variables

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

Class luxury Module luxury\_gift

# 8 Module luxury\_gift

#### 8.1 Variables

Name	Description
_package_	Value: None

## 8.2 Class luxury

```
object —
q3_gift.gift —
luxury_gift.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__ extit(inherited documentation)
```

## Inherited from object

#### 8.2.2 Properties

Name	Description
Inherited from object	
class	

Name	Description
Inherited from q3_gift.gift (Section 13.2)	
_abstractmethods_	

Class miser Module miser\_boy

# 9 Module miser\_boy

#### 9.1 Variables

Name	Description
package	Value: None

### 9.2 Class miser

```
object —
q3_boy.boy —
miser_boy.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__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 9.2.2 Properties

Name	Description
Inherited from object	
_class	

Class miser

Module miser\_boy

Name	Description
_abstractmethods	Value: frozenset([])

## 9.2.4 Instance Variables

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

Class normal Module normal\_girl

# 10 Module normal\_girl

#### 10.1 Variables

Name	Description
_package_	Value: None

### 10.2 Class normal

```
object —
q3_girl.girl —
normal_girl.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__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 10.2.2 Properties

Name	Description
Inherited from object	
_class	

#### 10.2.3 Instance Variables

Class normal Module normal\_girl

Name	Description
Inherited from q3_girl.girl (Section 14.2)	
happiness	

# 11 Module q3

# 11.1 Functions

```
\mathbf{comapare\_gifts}(\mathit{gift\_object1},\,\mathit{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<="" td=""></closed>
	'ans_file_Happiness.txt', mode 'a' at
	0x7feb
boysfile	Value: <closed 'boys.csv',="" file="" mode<="" td=""></closed>
	'r' at 0x7feba8aaf1e0>

 $continued\ on\ next\ page$ 

Variables Module q3

Name	Description
giftsfile	Value: <closed 'gifts.txt',="" file="" mode<="" th=""></closed>
	'r' at 0x7feba8aaf420>
girlsfile	Value: <closed 'girls.txt',="" file="" mode<="" th=""></closed>
	'r' at 0x7feba8aaf150>
hap_boy	Value: 69
hap_girl	Value: 69
i	Value: 3
j	Value: 19
main_cost	Value: 178
row	Value: ['Luxury ', ' 6 ', ' 7']
X	Value: 118
у	Value: 129

Class boy Module q3\_boy

## 12 Module q3\_boy

#### 12.1 Variables

Name	Description
package	Value: None

### 12.2 Class 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

#### 12.2.2 Properties

Name	Description
Inherited from object	
class	

Name	Description
_abstractmethods_	Value: frozenset(['cal_happiness'])

Class boy Module q3\_boy

# 12.2.4 Instance Variables

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

Class gift Module q3\_gift

## 13 Module q3\_gift

#### 13.1 Variables

Name	Description
package	Value: None

## 13.2 Class 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

#### 13.2.2 Properties

Name	Description
Inherited from object	
class	

Name	Description
_abstractmethods_	Value: frozenset([])

Class girl Module q3\_girl

# 14 Module q3\_girl

#### 14.1 Variables

Name	Description
package	Value: None

## 14.2 Class girl

 $\textbf{Known Subclasses:} \ \ \text{choosy\_girl.choosy, chossy\_girl.Choosy, desperate\_girl.desperate, normal\_girl.normal}$ 

#### 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)
```

## Inherited from object

#### 14.2.2 Properties

Name	Description
Inherited from object	
class	

#### 14.2.3 Instance Variables

Class girl Module q3\_girl

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

 $15 \quad Script \; script-ans\_file\_Compatibility\_txt$ 

 $16 \quad Script \; script-ans\_file\_Happiness\_after\_breakup\_txt$ 

 ${\bf 17} \quad {\bf Script\ script\hbox{-}ans\_file\_Happiness\_breakup\_txt}$ 

 $18 \quad Script \; script-ans\_file\_Happiness\_txt$ 

 $19 \quad Script \; script-ans\_file\_couples\_q7\_txt$ 

 ${\bf 20}\quad {\bf Script\ script\mbox{-}ans\_file\_couples\_txt}$ 

# ${\bf 21}\quad {\bf Script\ script\hbox{-}boys\_csv}$

 ${\bf 22}\quad Script\ script\mbox{-}gifting\_log\_q9\_txt$ 

# ${\bf 23}\quad Script\ script\hbox{-}gifts\_txt$

# ${\bf 24}\quad {\bf Script\ script\hbox{-}girls\_txt}$

# ${\bf 25} \quad Script \ script{-log\_txt}$

Class utility Module utility\_gift

# 26 Module utility\_gift

#### 26.1 Variables

Name	Description
package	Value: None

## 26.2 Class utility

```
object \( \) \( q3_\text{gift.gift} \) \( \) \( \text{utility_gift.utility} \)
```

### 26.2.1 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__ extit(inherited documentation)
```

## Inherited from object

```
__delattr__(), __format__(), __getattribute__(), __hash__(), __new__(), __reduce__(), __reduce_ex__(), __repr__(), __setattr__(), __sizeof__(), __str__(), __subclasshook__()
```

#### 26.2.2 Properties

Name	Description
Inherited from object	
_class	

Name	Description
Inherited from q3_gift.gift (S	ection 13.2)
$\_$ abstractmethods $\_$	

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