

PPL Assignment - Question11

API Documentation

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1 Package error-1-`TypeError`

1.1 Modules

- **boy** (*Section ??, p. ??*)
- **boy'** (*Section 2, p. 3*)
- **couple** (*Section ??, p. ??*)
- **couple'** (*Section 3, p. 5*)
- **gift** (*Section ??, p. ??*)
- **gift'** (*Section 4, p. 7*)
- **girl** (*Section 5, p. 9*)
- **q11** (*Section ??, p. ??*)
- **q11'** (*Section 6, p. 12*)
- **utility** (*Section 7, p. 13*)

1.2 Variables

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

2 Module error-1-typeError.boy'

2.1 Variables

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

2.2 Class Boy

Known Subclasses: error-1-typeError.boy.Geek, error-1-typeError.boy.Generous, error-1-typeError.boy.Miser

:param boy: a boy object :param name: name attribute of the boy object :param attractiveness: attractiveness of the boy :param budget: Budget the boy has :param intelligence_level: Intelligence level of the boy :param min_attraction_requirement: Attraction Requirement of the boy :param committed: Commitment status of the boy 0-single 1-committed :param happiness: Happiness of the boy

2.2.1 Methods

```
__init__(self, name, attractiveness, budget, intelligence_level, min_attraction_requirement,
committed, happiness)
```

```
commit(self)
```

```
isCommitted(self)
```

2.3 Class Geek

```

error-1-typeError.boy.Boy └─
                             error-1-typeError.boy.Geek

```

2.3.1 Methods

```
__init__(self, name, attractiveness, budget, intelligence_level, min_attraction_requirement,
committed, happiness)
```

Overrides: error-1-typeError.boy.Boy.__init__

```
getHappiness(self, girl, total_gifts)
```

Inherited from error-1-typeError.boy.Boy(Section 3.2)

commit(), isCommitted()

2.4 Class Generous



2.4.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>attractiveness</i> , <i>budget</i> , <i>intelligence_level</i> , <i>min_attraction_requirement</i> , <i>committed</i> , <i>happiness</i>) Overrides: error-1-typeError.boy.Boy. <code>__init__</code>

<code>getHappiness</code> (<i>self</i> , <i>girl</i> , <i>total_gifts</i>)

Inherited from error-1-typeError.boy.Boy(Section 3.2)

`commit()`, `isCommitted()`

2.5 Class Miser



2.5.1 Methods

<code>__init__</code> (<i>self</i> , <i>name</i> , <i>attractiveness</i> , <i>budget</i> , <i>intelligence_level</i> , <i>min_attraction_requirement</i> , <i>committed</i> , <i>happiness</i>) Overrides: error-1-typeError.boy.Boy. <code>__init__</code>

<code>getHappiness</code> (<i>self</i> , <i>girl</i> , <i>total_gifts</i>)

Inherited from error-1-typeError.boy.Boy(Section 3.2)

`commit()`, `isCommitted()`

3 Module error-1-typeError.couple'

3.1 Variables

Name	Description
<code>--package--</code>	Value: 'error-1-typeError'

3.2 Class Boy

Known Subclasses: error-1-typeError.boy.Geek, error-1-typeError.boy.Generous, error-1-typeError.boy.Miser

:param boy: a boy object :param name: name attribute of the boy object :param attractiveness: attractiveness of the boy :param budget: Budget the boy has :param intelligence_level: Intelligence level of the boy :param min_attraction_requirement: Attraction Requirement of the boy :param committed: Commitment status of the boy 0-single 1-committed :param happiness: Happiness of the boy

3.2.1 Methods

```
--init--(self, name, attractiveness, budget, intelligence_level,
min_attraction_requirement, committed, happiness)
```

```
commit(self)
```

```
isCommitted(self)
```

3.3 Class Couple

3.3.1 Methods

```
--init--(self, boy, girl, happiness, compatibility)
```

3.4 Class Girl

Known Subclasses: error-1-typeError.girl.Choosy, error-1-typeError.girl.Desperate, error-1-typeError.girl.Normal

:param name: name attribute of the Girl object :param attractiveness: attractiveness of the Girl :param maintainance_budget: maintainance Budget the girl requires :param intelligence_level: Intelligence level of the Girl :param min_attraction_requirement: Attraction Requirement of the girl :param committed: Commitment status of the Girl 0-single 1-committed :param happiness: Happiness of the Girl

3.4.1 Methods

```
__init__(self, name, attractiveness, maintainance_budget, intelligence_level,  
criterion, committed, happiness)
```

```
isCommitted(self)
```

```
commit(self)
```

3.4.2 Instance Variables

Name	Description
happiness	Method to find commitment status
committed	Subclass of Girl class for Choosy

4 Module error-1-typeError.gift'

4.1 Variables

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

4.2 Class Gift

Known Subclasses: error-1-typeError.gift.essentialGift, error-1-typeError.gift.luxuryGift, error-1-typeError.gift.utilityGift

:param: price : Price of the gift :param: value: Value of the gift

4.2.1 Methods

<code>__init__(self, price, value, used=False)</code>

4.3 Class essentialGift

error-1-typeError.gift.Gift —
error-1-typeError.gift.essentialGift

4.3.1 Methods

<code>__init__(self, price, value, used, Type)</code> Overrides: error-1-typeError.gift.Gift.__init__
--

4.4 Class luxuryGift

error-1-typeError.gift.Gift —
error-1-typeError.gift.luxuryGift

4.4.1 Methods

`--init--(self, price, value, used, difficulty, rating, Type)`

Overrides: `error-1-typeError.gift.Gift.--init--`

4.5 Class *utilityGift*

`error-1-typeError.gift.Gift`  `error-1-typeError.gift.utilityGift`

4.5.1 Methods

`--init--(self, price, value, used, utility_value, utility_class, Type)`

Overrides: `error-1-typeError.gift.Gift.--init--`

5 Module error-1-typeError.girl

5.1 Variables

Name	Description
<code>--package--</code>	Value: 'error-1-typeError'

5.2 Class Girl

Known Subclasses: error-1-typeError.girl.Choosy, error-1-typeError.girl.Desperate, error-1-typeError.girl.Normal

:param name: name attribute of the Girl object :param attractiveness: attractiveness of the Girl :param maintainance_budget: maintainance Budget the girl requires :param intelligence_level: Intelligence level of the Girl :param min_attraction_requirement: Attraction Requirement of the girl :param committed: Commitment status of the Girl 0-single 1-committed :param happiness: Happiness of the Girl

5.2.1 Methods

```
--init--(self, name, attractiveness, maintainance_budget, intelligence_level,
criterion, committed, happiness)
```

```
isCommitted(self)
```

```
commit(self)
```

5.2.2 Instance Variables

Name	Description
happiness	Method to find commitment status
committed	Subclass of Girl class for Choosy

5.3 Class Choosy

```
error-1-typeError.girl.Girl └─
                             error-1-typeError.girl.Choosy
```

5.3.1 Methods

```
__init__(self, name, attractiveness, maintainance_budget, intelligence_level,
criterion, committed, happiness)
```

Overrides: error-1-typeError.girl.Girl.__init__

```
getHappiness(self, boy, total_gifts, total_gift_value)
```

Inherited from error-1-typeError.girl.Girl (Section 5.2)

commit(), isCommitted()

5.3.2 Instance Variables

Name	Description
<i>Inherited from error-1-typeError.girl.Girl (Section 5.2)</i>	
committed, happiness	

5.4 Class Normal

```
error-1-typeError.girl.Girl └─
                             error-1-typeError.girl.Normal
```

5.4.1 Methods

```
__init__(self, name, attractiveness, maintainance_budget, intelligence_level,
criterion, committed, happiness)
```

Overrides: error-1-typeError.girl.Girl.__init__

```
getHappiness(self, boy, total_gifts, total_gift_value)
```

Inherited from error-1-typeError.girl.Girl (Section 5.2)

commit(), isCommitted()

5.4.2 Instance Variables

Name	Description
<i>Inherited from error-1-typeError.girl.Girl (Section 5.2)</i>	

continued on next page

6 Module error-1-typeError.q11'

6.1 Functions

<code>generateBoyList()</code>

<code>generateGirlList()</code>

<code>giveGifts(<i>boy_list</i>, <i>girl_list</i>)</code>

<code>k_most_happy_couples(<i>k</i>, <i>couple_list</i>)</code>

<code>q3()</code>

6.2 Variables

Name	Description
<code>--package--</code>	Value: 'error-1-typeError'

7 Module error-1-`TypeError`.utility

7.1 Functions

```
randomName(size=6, chars= 'ABCDEFGHIJKLMNOPQRSTUVWXYZ')
```

```
generateBoyList()
```

```
generateGirlList()
```

```
generateGiftList()
```

```
makeCouples(mode, boy_list, girl_list)
```

```
giveGifts(boy_list, girl_list)
```

```
k_most_happy_couples(k, couple_list)
```

```
k_least_happy_couples(couple_list)
```

7.2 Variables

Name	Description
<code>--package--</code>	Value: <code>'error-1-<code>TypeError</code>'</code>

8 Script script-boys_list.txt

9 Script script-couple_list.txt

9.1 Variables

Name	Description
__package__	Value: None

10 Script script-gift_list.txt

11 Script script-girls_list.txt

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