

PPL Assignment - Question4

API Documentation

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1 Module ppl-assignment-CosmicCoder96.q4.boy'

1.1 Variables

Name	Description
--package--	Value: None

1.2 Class Boy

Known Subclasses: ppl-assignment-CosmicCoder96.q4.boy.Geek, ppl-assignment-CosmicCoder96.q4.boy.Generous, ppl-assignment-CosmicCoder96.q4.boy.Miser

1.2.1 Methods

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

```
commit(self)
```

```
isCommitted(self)
```

1.3 Class Geek

```

ppl-assignment-CosmicCoder96.q4.boy.Boy └─
                                         ppl-assignment-CosmicCoder96.q4.boy.Geek

```

1.3.1 Methods

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

Overrides: ppl-assignment-CosmicCoder96.q4.boy.Boy.__init__

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

Inherited from ppl-assignment-CosmicCoder96.q4.boy.Boy(Section 2.2)

commit(), isCommitted()

1.4 Class Generous

ppl-assignment-CosmicCoder96.q4.boy.Boy —|
ppl-assignment-CosmicCoder96.q4.boy.Generous

1.4.1 Methods

```
__init__(self, name, attractiveness, budget, intelligence_level,  
min_attraction_requirement, committed, happiness)  
Overrides: ppl-assignment-CosmicCoder96.q4.boy.Boy.__init__
```

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

Inherited from ppl-assignment-CosmicCoder96.q4.boy.Boy(Section 2.2)

commit(), isCommitted()

1.5 Class Miser

ppl-assignment-CosmicCoder96.q4.boy.Boy —|
ppl-assignment-CosmicCoder96.q4.boy.Miser

1.5.1 Methods

```
__init__(self, name, attractiveness, budget, intelligence_level,  
min_attraction_requirement, committed, happiness)  
Overrides: ppl-assignment-CosmicCoder96.q4.boy.Boy.__init__
```

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

Inherited from ppl-assignment-CosmicCoder96.q4.boy.Boy(Section 2.2)

commit(), isCommitted()

2 Module ppl-assignment-CosmicCoder96.q4.couple'

2.1 Variables

Name	Description
<code>--package--</code>	Value: 'ppl-assignment-CosmicCoder96.q4'

2.2 Class Boy

Known Subclasses: ppl-assignment-CosmicCoder96.q4.boy.Geek, ppl-assignment-CosmicCoder96.q4.boy.ppl-assignment-CosmicCoder96.q4.boy.Miser

2.2.1 Methods

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

```
commit(self)
```

```
isCommitted(self)
```

2.3 Class Couple

2.3.1 Methods

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

2.4 Class Girl

Known Subclasses: ppl-assignment-CosmicCoder96.q4.girl.Choosy, ppl-assignment-CosmicCoder96.q4.girl.ppl-assignment-CosmicCoder96.q4.girl.Normal

2.4.1 Methods

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

isCommitted(*self*)

commit(*self*)

3 Module ppl-assignment-CosmicCoder96.q4.gift'

3.1 Variables

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

3.2 Class Gift

Known Subclasses: ppl-assignment-CosmicCoder96.q4.gift.essentialGift, ppl-assignment-CosmicCoder96.q4.gift.luxuryGift, ppl-assignment-CosmicCoder96.q4.gift.utilityGift

3.2.1 Methods

```
__init__(self, price, value, used=False)
```

3.3 Class essentialGift

```
ppl-assignment-CosmicCoder96.q4.gift.Gift └─ ppl-assignment-CosmicCoder96.q4.gift.essentialGift
```

3.3.1 Methods

```
__init__(self, price, value, used, Type)  
Overrides: ppl-assignment-CosmicCoder96.q4.gift.Gift.__init__
```

3.4 Class luxuryGift

```
ppl-assignment-CosmicCoder96.q4.gift.Gift └─ ppl-assignment-CosmicCoder96.q4.gift.luxuryGift
```

3.4.1 Methods

`__init__(self, price, value, used, difficulty, rating, Type)`

Overrides: `ppl-assignment-CosmicCoder96.q4.gift.Gift.__init__`

3.5 Class *utilityGift*

ppl-assignment-CosmicCoder96.q4.gift.Gift — **ppl-assignment-CosmicCoder96.q4.gift.utilityGift**

3.5.1 Methods

`__init__(self, price, value, used, utility_value, utility_class, Type)`

Overrides: `ppl-assignment-CosmicCoder96.q4.gift.Gift.__init__`

4 Module ppl-assignment-CosmicCoder96.q4.girl

4.1 Variables

Name	Description
<code>--package--</code>	Value: <code>'ppl-assignment-CosmicCoder96.q4'</code>

4.2 Class Girl

Known Subclasses: `ppl-assignment-CosmicCoder96.q4.girl.Choosy`, `ppl-assignment-CosmicCoder96.q4.girl.Normal`

4.2.1 Methods

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

```
isCommitted(self)
```

```
commit(self)
```

4.3 Class Choosy

```
ppl-assignment-CosmicCoder96.q4.girl.Girl └─ ppl-assignment-CosmicCoder96.q4.girl.Choosy
```

4.3.1 Methods

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

Overrides: `ppl-assignment-CosmicCoder96.q4.girl.Girl.__init__`

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

Inherited from `ppl-assignment-CosmicCoder96.q4.girl.Girl` (Section 4.2)

`commit()`, `isCommitted()`

4.4 Class Normal



4.4.1 Methods

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

Overrides: ppl-assignment-CosmicCoder96.q4.girl.Girl.__init__

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

Inherited from ppl-assignment-CosmicCoder96.q4.girl.Girl(Section 4.2)

commit(), isCommitted()

4.5 Class Desperate



4.5.1 Methods

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

Overrides: ppl-assignment-CosmicCoder96.q4.girl.Girl.__init__

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

Inherited from ppl-assignment-CosmicCoder96.q4.girl.Girl(Section 4.2)

commit(), isCommitted()

5 Module *ppl-assignment-CosmicCoder96.q4.q4'*

5.1 Functions

<code>generateBoyList()</code>

<code>generateGirlList()</code>

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

<code>q4()</code>

<code>valentine(<i>k</i>, <i>couple_list</i>, <i>boy_list</i>, <i>girl_list</i>)</code>

5.2 Variables

Name	Description
<code>--package--</code>	Value: <code>'ppl-assignment-CosmicCoder96.q4'</code>

6 Module `ppl-assignment-CosmicCoder96.q4.utility`

6.1 Functions

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

```
generateBoyList()
```

```
generateGirlList()
```

```
generateGiftList()
```

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

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

```
k_most_happy_couples(couple_list)
```

```
k_least_happy_couples(couple_list)
```

```
valentine(k, couple_list, boy_list, girl_list)
```

6.2 Variables

Name	Description
<code>--package--</code>	Value: <code>'ppl-assignment-CosmicCoder96.q4'</code>

7 Package ppl-assignment-CosmicCoder96.q4'

7.1 Modules

- **boy'** (*Section 1, p. 3*)
- **couple'** (*Section 2, p. 5*)
- **gift'** (*Section 3, p. 7*)
- **girl** (*Section 4, p. 9*)
- **q4'** (*Section 5, p. 11*)
- **utility** (*Section 6, p. 12*)

7.2 Variables

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

8 Script script-boys_list.txt

9 Script script-couple_list.txt

10 Script script-gift_list.txt

11 Script script-girls_list.txt

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