

# PPL Assignment - Question9

API Documentation

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# 1 Module ppl-assignment-CosmicCoder96.q9.boy'

## 1.1 Variables

Name	Description
--package--	Value: None

## 1.2 Class Boy

**Known Subclasses:** ppl-assignment-CosmicCoder96.q9.boy.Geek, ppl-assignment-CosmicCoder96.q9.boy.Generous, ppl-assignment-CosmicCoder96.q9.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.q9.boy.Boy └─ ppl-assignment-CosmicCoder96.q9.boy.Geek
```

### 1.3.1 Methods

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

Overrides: ppl-assignment-CosmicCoder96.q9.boy.Boy.\_\_init\_\_

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

*Inherited from ppl-assignment-CosmicCoder96.q9.boy.Boy(Section 2.2)*

commit(), isCommitted()

## 1.4 Class Generous

ppl-assignment-CosmicCoder96.q9.boy.Boy └─  
ppl-assignment-CosmicCoder96.q9.boy.Generous

### 1.4.1 Methods

```
__init__(self, name, attractiveness, budget, intelligence_level,  
min_attraction_requirement, committed, happiness)  
Overrides: ppl-assignment-CosmicCoder96.q9.boy.Boy.__init__
```

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

*Inherited from ppl-assignment-CosmicCoder96.q9.boy.Boy(Section 2.2)*

commit(), isCommitted()

## 1.5 Class Miser

ppl-assignment-CosmicCoder96.q9.boy.Boy └─  
ppl-assignment-CosmicCoder96.q9.boy.Miser

### 1.5.1 Methods

```
__init__(self, name, attractiveness, budget, intelligence_level,  
min_attraction_requirement, committed, happiness)  
Overrides: ppl-assignment-CosmicCoder96.q9.boy.Boy.__init__
```

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

*Inherited from ppl-assignment-CosmicCoder96.q9.boy.Boy(Section 2.2)*

commit(), isCommitted()

## 2 Module ppl-assignment-CosmicCoder96.q9.couple'

### 2.1 Variables

Name	Description
<code>--package--</code>	<b>Value:</b> <code>'ppl-assignment-CosmicCoder96.q9'</code>

### 2.2 Class Boy

**Known Subclasses:** ppl-assignment-CosmicCoder96.q9.boy.Geek, ppl-assignment-CosmicCoder96.q9.boy.ppl-assignment-CosmicCoder96.q9.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.q9.girl.Choosy, ppl-assignment-CosmicCoder96.q9.girl.ppl-assignment-CosmicCoder96.q9.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.q9.gift'

#### 3.1 Variables

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

#### 3.2 Class Gift

**Known Subclasses:** ppl-assignment-CosmicCoder96.q9.gift.essentialGift, ppl-assignment-CosmicCoder96.q9.gift.luxuryGift, ppl-assignment-CosmicCoder96.q9.gift.utilityGift

##### 3.2.1 Methods

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

#### 3.3 Class essentialGift

```
ppl-assignment-CosmicCoder96.q9.gift.Gift └─ ppl-assignment-CosmicCoder96.q9.gift.essentialGift
```

##### 3.3.1 Methods

```
__init__(self, price, value, used, Type)  
Overrides: ppl-assignment-CosmicCoder96.q9.gift.Gift.__init__
```

#### 3.4 Class luxuryGift

```
ppl-assignment-CosmicCoder96.q9.gift.Gift └─ ppl-assignment-CosmicCoder96.q9.gift.luxuryGift
```

### 3.4.1 Methods

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

Overrides: `ppl-assignment-CosmicCoder96.q9.gift.Gift.__init__`

## 3.5 Class *utilityGift*

`ppl-assignment-CosmicCoder96.q9.gift.Gift` └─ **`ppl-assignment-CosmicCoder96.q9.gift.utilityGift`**

### 3.5.1 Methods

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

Overrides: `ppl-assignment-CosmicCoder96.q9.gift.Gift.__init__`



## 4 Module ppl-assignment-CosmicCoder96.q9.girl

### 4.1 Variables

Name	Description
<code>--package--</code>	<b>Value:</b> <code>'ppl-assignment-CosmicCoder96.q9'</code>

### 4.2 Class Girl

**Known Subclasses:** `ppl-assignment-CosmicCoder96.q9.girl.Choosy`, `ppl-assignment-CosmicCoder96.q9.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.q9.girl.Girl └─ ppl-assignment-CosmicCoder96.q9.girl.Choosy
```

#### 4.3.1 Methods

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

Overrides: `ppl-assignment-CosmicCoder96.q9.girl.Girl.__init__`

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

*Inherited from `ppl-assignment-CosmicCoder96.q9.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.q9.girl.Girl.\_\_init\_\_

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

*Inherited from ppl-assignment-CosmicCoder96.q9.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.q9.girl.Girl.\_\_init\_\_

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

*Inherited from ppl-assignment-CosmicCoder96.q9.girl.Girl(Section 4.2)*

commit(), isCommitted()

## 5 Module *ppl-assignment-CosmicCoder96.q9.q9'*

### 5.1 Functions

<code>generateBoyList()</code>
--------------------------------

<code>generateGirlList()</code>
---------------------------------

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

<code>makeCouples(<i>mode</i>, <i>boy_list</i>, <i>girl_list</i>, <i>k</i>)</code>
--

<code>q9()</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>	<b>Value:</b> <code>'ppl-assignment-CosmicCoder96.q9'</code>

## 6 Module `ppl-assignment-CosmicCoder96.q9.utility`

### 6.1 Functions

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

```
generateBoyList()
```

```
generateGirlList()
```

```
generateGiftList()
```

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

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

```
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>	<b>Value:</b> <code>'ppl-assignment-CosmicCoder96.q9'</code>

## 7 Package ppl-assignment-CosmicCoder96.q9'

### 7.1 Modules

- **boy'** (*Section 1, p. 2*)
- **couple'** (*Section 2, p. 4*)
- **gift'** (*Section 3, p. 6*)
- **girl** (*Section 4, p. 8*)
- **q9'** (*Section 5, p. 10*)
- **utility** (*Section 6, p. 11*)

### 7.2 Variables

Name	Description
<code>--package--</code>	<b>Value:</b> 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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