

# Documentation

## API Documentation

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# 1 Module allocator

## 1.1 Variables

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

## 1.2 Class allocator

allocates boyfriends to girls i.e. makes couples and stores them in different structures

### 1.2.1 Methods

<b>allocator1</b> ( <i>self</i> , <i>B</i> , <i>G</i> , <i>GB</i> , <i>k</i> )
allocates and stores in List
<b>allocator2</b> ( <i>self</i> , <i>B</i> , <i>G</i> , <i>GB</i> , <i>k</i> )
allocates and stores in List(sorted)
<b>allocator3</b> ( <i>self</i> , <i>B</i> , <i>G</i> , <i>GB</i> , <i>k</i> )
allocates and stores in hash table
<b>binarySearch</b> ( <i>self</i> , <i>alist</i> , <i>boyname</i> )
carries out binary search on the Couples list for searching girlfriend of a given boy

## 2 Module boy\_geek

### 2.1 Variables

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

### 2.2 Class GeekBoy

```

boys.Boy └─
           boy_geek.GeekBoy

```

boy class for geek boys

#### 2.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor
Overrides: boys.Boy.__init__

*Inherited from boys.Boy(Section 5.2)*

`is_elligible()`

### 3 Module *boy\_generous*

#### 3.1 Variables

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

#### 3.2 Class *GenerousBoy*

```

boys.Boy └─
           boy_generous.GenerousBoy

```

boy class for generous boys

##### 3.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor
Overrides: <code>boys.Boy.__init__</code>

*Inherited from `boys.Boy`(Section 5.2)*

`is_elligible()`

## 4 Module boy\_miser

### 4.1 Variables

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

### 4.2 Class MiserBoy

```

boys.Boy └─
           boy_miser.MiserBoy

```

boy class for miser boys

#### 4.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor
Overrides: boys.Boy.__init__

*Inherited from boys.Boy(Section 5.2)*

`is_elligible()`

## 5 Module boys

### 5.1 Variables

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

### 5.2 Class Boy

**Known Subclasses:** `boy_geek.GeekBoy`, `boy_generous.GenerousBoy`, `boy_miser.MiserBoy`  
 boy class for all boys

#### 5.2.1 Methods

<code>__init__(self, name, atr, gfbudget, intelli, min_atr_req, type)</code>
constructor

<code>is_elligible(self, mbudget, atr)</code>
checks the elligibility of a given Girl, for the current instance of Boy class

## 6 Module couple

### 6.1 Variables

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

### 6.2 Class Couple

couple class for all couples

#### 6.2.1 Methods

<code>__init__(self, boy, girl)</code>
constructor

<code>set_happiness(self)</code>
set the happiness of a couple

<code>set_compatibility(self)</code>
set the compatibility of a couple



## 7 Module `gift_essential`

### 7.1 Variables

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

### 7.2 Class `EssentialGift`

`gifts.Gift` └─  
           **`gift_essential.EssentialGift`**

gift class for essential gifts

#### 7.2.1 Methods

<b><code>__init__</code></b> ( <i>self, name, price, value, type</i> )
constructor
Overrides: <code>gifts.Gift.__init__</code>

## 8 Module `gift_luxury`

### 8.1 Variables

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

### 8.2 Class `LuxuryGift`

`gifts.Gift` —  
`gift_luxury.LuxuryGift`

gift class for luxury gifts

#### 8.2.1 Methods

<code>__init__</code> ( <i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>type</i> , <i>lxry_rtnng</i> , <i>difficulty</i> )
constructor
Overrides: <code>gifts.Gift.__init__</code>

## 9 Module `gift_utility`

### 9.1 Variables

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

### 9.2 Class `UtilityGift`

`gifts.Gift` —  
`gift_utility.UtilityGift`

gift class for utility gifts

#### 9.2.1 Methods

<code>__init__</code> ( <i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>type</i> , <i>utlty_value</i> , <i>utlty_class</i> )
constructor
Overrides: <code>gifts.Gift.__init__</code>

## 10 Module gifts

### 10.1 Variables

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

### 10.2 Class Gift

**Known Subclasses:** `gift_essential.EssentialGift`, `gift_luxury.LuxuryGift`, `gift_utility.UtilityGift`  
 gift class for all gifts

#### 10.2.1 Methods

<code>__init__</code> ( <i>self</i> , <i>name</i> , <i>price</i> , <i>value</i> , <i>type</i> )
constructor

## 11 Module girl\_choosy

### 11.1 Variables

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

### 11.2 Class ChoosyGirl

girls.Girl —  
                     girl\_choosy.ChoosyGirl

girl class for choosy girls

#### 11.2.1 Methods

<code>__init__(self, name, atr, mbudget, intelli, type)</code>
constructor
Overrides: girls.Girl.__init__

*Inherited from girls.Girl(Section 14.2)*

is\_elligible()

## 12 Module *girl\_desperate*

### 12.1 Variables

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

### 12.2 Class *DesperateGirl*

girls.Girl —  
                     girl\_desperate.DesperateGirl

girl class for desperate girls

#### 12.2.1 Methods

<code>__init__(self, name, atr, mbudget, intelli, type)</code>
constructor
Overrides: girls.Girl.__init__

*Inherited from girls.Girl(Section 14.2)*

`is_elligible()`

## 13 Module girl\_normal

### 13.1 Variables

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

### 13.2 Class NormalGirl

girls.Girl —  
                     girl\_normal.NormalGirl

girl class for normal girls

#### 13.2.1 Methods

<code>__init__</code> ( <i>self, name, atr, mbudget, intelli, type</i> )
constructor
Overrides: girls.Girl. <code>__init__</code>

*Inherited from girls.Girl(Section 14.2)*

`is_elligible()`

## 14 Module girls

### 14.1 Variables

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

### 14.2 Class Girl

**Known Subclasses:** `girl_choosy.ChoosyGirl`, `girl_desperate.DesperateGirl`, `girl_normal.NormalGirl`  
 girl class for all girls

#### 14.2.1 Methods

<code>__init__(self, name, atr, mbudget, intelli, type)</code>
constructor

<code>is_elligible(self, gfbudget)</code>
checks the elligibility of a given Boy, for the current instance of Girl class



## 15 Module q7\_driver

### 15.1 Functions

<b>allocate()</b>
reads and stores the input from the boys.csv and girls.csv files and then makes the valid couples

### 15.2 Variables

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

## 16 Module utility

### 16.1 Functions

<b>utility()</b>
creates the input csv files

<b>create</b> ( <i>file</i> , <i>list</i> )
writes to csv files

### 16.2 Variables

Name	Description
__package__	Value: None

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