

Snake

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## Chapter 1

# Module Interface Specification

Use doxygen (or equivalent) to document the interface for your modules.



# Chapter 2

## Class Index

### 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

- [Food.Food](#)  
An Abstract Data type which represents a one-unit of food . . . . . 7
- [Interface.GUI](#)  
A Class that will contain useful functions in order for the creation of main interface . . . . . 8
- [highscore.HighScore](#)  
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- [Snake.Snake](#)  
An Abstract Data type representing a snake character object . . . . . 11



# Chapter 3

## File Index

### 3.1 File List

Here is a list of all documented files with brief descriptions:

|                              |   |    |
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| <a href="#">Food.py</a>      | Implements an abstract data type for a snake's food . . . . . | 13 |
| <a href="#">highscore.py</a> | Implements the highscore interface . . . . .                  | 13 |
| <a href="#">Snake.py</a>     | Implements an abstract data type for a snake . . . . .        | 14 |



# Chapter 4

## Class Documentation

### 4.1 Food.Food Class Reference

An Abstract Data type which represents a one-unit of food.

#### Public Member Functions

- def `__init__` (self, blockSize)  
*Food constructor.*
- def `draw_food` (self, location)  
*Draw method uses pygame to draw the food object on the window.*
- def `redraw_food` (self, x, y, location, screenSize)  
*redraw\_food method redraws the food on the screen randomly*

#### Public Attributes

- **size**

#### 4.1.1 Detailed Description

An Abstract Data type which represents a one-unit of food.

#### 4.1.2 Constructor & Destructor Documentation

4.1.2.1 def Food.Food.\_\_init\_\_( self, blockSize )

`Food` constructor.

Initializes the size of the food, this needs to be the same as snake's block size

## Parameters

|                  |  |
|------------------|--|
| <i>blockSize</i> | the width and height of the square block representing the food |
|------------------|--|

### 4.1.3 Member Function Documentation

#### 4.1.3.1 def Food.Food.draw\_food ( self, location )

Draw method uses pygame to draw the food object on the window.

## Parameters

|                 |  |
|-----------------|--|
| <i>location</i> | A list which consists the x and y location of the food |
|-----------------|--|

#### 4.1.3.2 def Food.Food.redraw\_food ( self, x, y, location, screenSize )

redraw\_food method redraws the food on the screen randomly

## Parameters

|                   |   |
|-------------------|---|
| <i>x</i>          | is the location of snake's x-axis head location   |
| <i>y</i>          | is the location of snake's y-axis head location   |
| <i>location</i>   | is a list that gives the location of present food |
| <i>screenSize</i> | is the size of the screen                         |

The documentation for this class was generated from the following file:

- [Food.py](#)

## 4.2 Interface.GUI Class Reference

A Class that will contain useful functions in order for the creation of main interface.

### Public Member Functions

- def [runfile](#) (runfilename)  
*A function for running other files.*
- def [button](#) (Surface, color, Rect, width)  
*A method to create a button.*
- def [text](#) (text, fontStyle, fontSize, color, coord, surface)  
*A method to display text.*

### 4.2.1 Detailed Description

A Class that will contain useful functions in order for the creation of main interface.

### 4.2.2 Member Function Documentation

#### 4.2.2.1 `def Interface.GUI.button ( Surface, color, Rect, width )`

A method to create a button.

This method will make a box on the interface

##### Parameters

|                |  |
|----------------|--|
| <i>surface</i> | The background (surface) the box should be made on     |
| <i>color</i>   | The color of the button to be made                     |
| <i>Rect</i>    | The coordinate of the button with the length and width |
| <i>width</i>   | The width of the sides of button                       |

#### 4.2.2.2 `def Interface.GUI.runfile ( runfilename )`

A function for running other files.

Executes another python file when this is selected, Given that the file is in same folder.

##### Parameters

|                    |                                     |
|--------------------|-------------------------------------|
| <i>runfilename</i> | The name of the file to be executed |
|--------------------|-------------------------------------|

#### 4.2.2.3 `def Interface.GUI.text ( text, fontStyle, fontSize, color, coord, surface )`

A method to display text.

This function will print the text on the interface

##### Parameters

|                  |  |
|------------------|--|
| <i>text</i>      | The text to be printed                                   |
| <i>fontStyle</i> | The font Style of the text to be displayed               |
| <i>fontSize</i>  | The size of the text written                             |
| <i>color</i>     | The color of the text                                    |
| <i>coord</i>     | The coordinate at which the text should start displaying |
| <i>surface</i>   | The background (surface) the text should be printed on   |

The documentation for this class was generated from the following file:

- Interface.py

## 4.3 highscore.HighScore Class Reference

A Class that will contain useful functions in order for the creation of highscore page.

### Public Member Functions

- def `runfile` (runfilename)  
*A function for running other files.*
- def `text` (text, fontStyle, fontSize, color, coord, surface)  
*A method to display text.*
- def `button` (Surface, color, Rect, width)  
*A method to create a button.*
- def `findHighscore` ()  
*Finds the highest score from the file.*

### 4.3.1 Detailed Description

A Class that will contain useful functions in order for the creation of highscore page.

### 4.3.2 Member Function Documentation

#### 4.3.2.1 def highscore.HighScore.button ( *Surface, color, Rect, width* )

A method to create a button.

This method will make a box on the interface

#### Parameters

|                |  |
|----------------|--|
| <i>surface</i> | The background (surface) the box should be made on     |
| <i>color</i>   | The color of the button to be made                     |
| <i>Rect</i>    | The coordinate of the button with the length and width |
| <i>width</i>   | The width of the sides of button                       |

#### 4.3.2.2 def highscore.HighScore.findHighscore ( )

Finds the highest score from the file.

This writes the input from the file in an array and find the max number from it

#### 4.3.2.3 def highscore.HighScore.runfile ( *runfilename* )

A function for running other files.

Executes another python file when this is selected, Given that the file is in same folder.

## Parameters

|                    |                                     |
|--------------------|-------------------------------------|
| <i>runfilename</i> | The name of the file to be executed |
|--------------------|-------------------------------------|

4.3.2.4 def highscore.HighScore.text ( *text*, *fontStyle*, *fontSize*, *color*, *coord*, *surface* )

A method to display text.

This function will print the text on the interface

## Parameters

|                  |  |
|------------------|--|
| <i>text</i>      | The text to be printed                                   |
| <i>fontStyle</i> | The font Style of the text to be displayed               |
| <i>fontSize</i>  | The size of the text written                             |
| <i>color</i>     | The color of the text                                    |
| <i>coord</i>     | The coordinate at which the text should start displaying |
| <i>surface</i>   | The background (surface) the text should be printed on   |

The documentation for this class was generated from the following file:

- [highscore.py](#)

## 4.4 Snake.Snake Class Reference

An Abstract Data type representing a snake character object.

### Public Member Functions

- def `__init__` (self, blockSize, direct, speed, axis)  
*Snake constructor.*
- def `draw` (self, x, y)  
*Draw method uses pygame to draw the snake object.*

### Public Attributes

- **speed**
- **direct**
- **size**
- **axis**

#### 4.4.1 Detailed Description

An Abstract Data type representing a snake character object.

## 4.4.2 Constructor & Destructor Documentation

4.4.2.1 `def Snake.Snake.__init__( self, blockSize, direct, speed, axis )`

[Snake](#) constructor.

Initializes a [Snake](#) object with its initial attributes

### Parameters

|                  |   |
|------------------|---|
| <i>blockSize</i> | the width and height of the square block representing the snake |
| <i>direct</i>    | The direction of the snake's movement                           |
| <i>speed</i>     | The initial speed of the snake's movement                       |

## 4.4.3 Member Function Documentation

4.4.3.1 `def Snake.Snake.draw( self, x, y )`

Draw method uses pygame to draw the snake object.

### Parameters

|          |  |
|----------|--|
| <i>x</i> | The x-coordinate where the block should be drawn |
| <i>y</i> | The y-coordinate where the block should be drawn |

The documentation for this class was generated from the following file:

- [Snake.py](#)

## Chapter 5

# File Documentation

### 5.1 Food.py File Reference

implements an abstract data type for a snake's food

#### Classes

- class [Food.Food](#)

*An Abstract Data type which represents a one-unit of food.*

#### 5.1.1 Detailed Description

implements an abstract data type for a snake's food

#### Author

Usman Irfan

#### Date

11/09/2018

### 5.2 highscore.py File Reference

implements the highscore interface

#### Classes

- class [highscore.HighScore](#)

*A Class that will contain useful functions in order for the creation of highscore page.*

## Functions

- def `highscore.main()`  
*Makes the highscore interface.*

### 5.2.1 Detailed Description

implements the highscore interface

#### Author

Vaibhav Chadha

#### Date

11/09/2018

### 5.2.2 Function Documentation

#### 5.2.2.1 `def highscore.main()`

Makes the highscore interface.

This will output the final interface using the class above which can be seen by executing this function.

## 5.3 Snake.py File Reference

implements an abstract data type for a snake

## Classes

- class `Snake.Snake`  
*An Abstract Data type representing a snake character object.*

### 5.3.1 Detailed Description

implements an abstract data type for a snake

#### Author

Andy Hameed

#### Date

11/09/2018

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