

# APPENDIX FOR CSE1710 MIDTERM TEST

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## Class MidtermServices

java.lang.Object  
└─ **MidtermServices**

```
public class MidtermServices
extends java.lang.Object
```

### Method Summary

static int	<a href="#">sumTheDigits</a> (java.lang.String theDigits) This method returns the sum of the individual digits of the passed String.
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### Methods inherited from class java.lang.Object

[equals](#), [getClass](#), [hashCode](#), [notify](#), [notifyAll](#), [toString](#), [wait](#), [wait](#), [wait](#)

### Method Detail

#### sumTheDigits

```
public static int sumTheDigits(java.lang.String theDigits)
    throws java.lang.RuntimeException
```

This method returns the sum of the individual digits of the passed String. For instance, if the String "1254" is provided, this method will return the value 12 (which is 1+2+5+4). If the individual characters are not digits and thus cannot be summed, then this method throws an exception

#### Parameters:

theDigits - a String

#### Returns:

the value as described above

#### Throws:

java.lang.RuntimeException - if passed String contains any characters that are NOT digits

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type.lib

## Class Rectangle

```
java.lang.Object
└─ type.lib.Rectangle
```

### All Implemented Interfaces:

java.io.Serializable

```
public class Rectangle
extends java.lang.Object
implements java.io.Serializable
```

A class that encapsulates a rectangle.

### Version:

7.0 - Summer 2010

### Author:

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### See Also:

[Serialized Form](#)

## Constructor Summary

[Rectangle](#)()

Construct a rectangle with zero width and zero height.

[Rectangle](#)(int width, int height)

Construct a rectangle with the passed width and height.

[Rectangle](#)([Rectangle](#) rectangle)

Construct a copy of the passed rectangle.

## Method Summary

boolean	<a href="#">equals</a> (java.lang.Object other) Determine if this rectangle is the same as the passed one.
int	<a href="#">getArea</a> () Determine the area of this rectangle.
int	<a href="#">getCircumference</a> () Determine the circumference of this rectangle.
double	<a href="#">getDiagonal</a> () Determine the length of the diagonal of this rectangle.
int	<a href="#">getHeight</a> () Determine the height of this rectangle.
int	<a href="#">getWidth</a> () Determine the width of this rectangle.
int	<a href="#">hashCode</a> () Compute a hash code for this Rectangle.
void	<a href="#">setHeight</a> (int height) Mutate the height this rectangle.
void	<a href="#">setWidth</a> (int width) Mutate the width this rectangle.

### Methods inherited from class java.lang.Object

clone, finalize, getClass, notify, notifyAll, toString, wait, wait, wait

## Constructor Detail

### Rectangle

```
public Rectangle()
```

Construct a rectangle with zero width and zero height.

---

### Rectangle

```
public Rectangle(int width,  
                int height)
```

Construct a rectangle with the passed width and height.

**Parameters:**

width - the width of the rectangle to construct.  
height - the height of the rectangle to construct.

---

### Rectangle

```
public Rectangle(Rectangle rectangle)
```

Construct a copy of the passed rectangle.

**Parameters:**

rectangle - the Rectangle object to copy.

**Throws:**

java.lang.RuntimeException - if rectangle = null

---

## Method Detail

### getWidth

```
public int getWidth()
```

Determine the width of this rectangle.

**Returns:**

the width of this rectangle

---

### getHeight

```
public int getHeight()
```

Determine the height of this rectangle.

**Returns:**

the height of this rectangle

---

### getDiagonal

```
public double getDiagonal()
```

Determine the length of the diagonal of this rectangle.

**Returns:**

the length of the diagonal of this rectangle

---

### getArea

```
public int getArea()
```

Determine the area of this rectangle.

**Returns:**  
the area of this rectangle

---

## getCircumference

```
public int getCircumference()
```

Determine the circumference of this rectangle.

**Returns:**  
the circumference of this rectangle

---

## setWidth

```
public void setWidth(int width)
```

Mutate the width this rectangle.

**Parameters:**  
width - the new width

---

## setHeight

```
public void setHeight(int height)
```

Mutate the height this rectangle.

**Parameters:**  
height - the new height

---

## equals

```
public boolean equals(java.lang.Object other)
```

Determine if this rectangle is the same as the passed one. Two rectangles are considered equal if they have the same width and height.

**Overrides:**  
equals in class java.lang.Object

**Parameters:**  
other - a reference to the object to test equality with.

**Returns:**  
true if other is not null and points to a rectangle that is equal to this one. The return is false otherwise.

---

## hashCode

```
public int hashCode()
```

Compute a hash code for this Rectangle.

**Overrides:**  
hashCode in class java.lang.Object

**Returns:**  
a hash code value for this object.

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